

**CALIFORNIA REGIONAL WATER QUALITY CONTROL REGIONAL BOARD**

**SAN FRANCISCO BAY REGION**

**ORDER No. R2-2003-0029**

**NPDES PERMIT NO. CA0037958**

**AMENDING WASTE DISCHARGE REQUIREMENTS FOR:**

**NOVATO SANITARY DISTRICT**

**NOVATO**

**MARIN COUNTY**

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**CALIFORNIA REGIONAL WATER QUALITY CONTROL REGIONAL BOARD  
SAN FRANCISCO BAY REGION**

**TENTATIVE ORDER No. R2-2003-00XX**

**NPDES PERMIT NO. CA0037958**

**AMENDING WASTE DISCHARGE REQUIREMENTS FOR:**

**NOVATO SANITARY DISTRICT**

**NOVATO**

**MARIN COUNTY**

**FINDINGS**

The California Regional Water Quality Control Regional Board, San Francisco Bay Region (the Regional Board) finds that:

1. On May 25, 1999, the Regional Board adopted Order No. 99-036, Waste Discharge Requirements, renewing National Pollutant Discharge Elimination System Permit (NPDES Permit) No. CA0037958 for the Novato Sanitary District (the Discharger) to discharge treated wastewater to San Pablo Bay, a water of the State and the United States (the existing permit).

**Discharge Description**

2. The Discharger owns and operates two municipal wastewater treatment facilities, the Novato Treatment Plant (also referred to as E-001) and the Ignacio Treatment Plant (also referred to as E-002) (collectively the Waste Water Treatment Plants – the WWTPs). The WWTPs collect sanitary waste from a primarily residential service area serving the Novato area. The WWTPs use one combined effluent discharge outfall (the combined discharge) to the intertidal mud flats of San Pablo Bay adjacent to the former Hamilton Air Force Base (the receiving water). This is a shallow water discharge. Discharge is prohibited annually from June 1 through August 31, and the prohibition period is limited because the discharge likely has minimal impact to the intertidal area of San Pablo Bay immediately before and after the dry weather season. The Discharger's current annual average dry weather flow (ADWF) is 5.4 million gallons per day (MGD), from both WWTPs into San Pablo Bay.
3. The Novato Treatment Plant (E-001) processes wastewater by primary clarification, activated sludge, secondary clarification, nitrification, gravity filtration, and disinfection with hypochlorite. The actual treatment processes used may vary depending on influent flow. The Novato Plant's ADWF of 4.53 MGD includes treatment with all unit processes. Wet weather flows up to 9 MGD receive complete treatment. Wet weather flows between 9 MGD and 16 MGD receive primary

treatment plus gravity filtration and disinfection. Wet weather flows above 16 MGD receive only gravity filtration and disinfection.

4. The Ignacio Treatment Plant (E-002) processes wastewater by primary clarification, biofiltration with trickling filters, secondary clarification, nitrification, gravity filtration and disinfection with hypochlorite. The treatment processes vary depending on influent flow. The Ignacio Plant's design ADWF capacity of 2.02 MGD includes treatment with all unit processes. Wet weather flows up to 4.04 MGD receive complete treatment. Wet weather flows above 4.04 MGD receive primary treatment plus nitrification, gravity filtration and disinfection.
5. During the discharge season, September 1 through May 31, combined effluent from both WWTPs is dechlorinated and discharged from a combined outfall (E-003) through a multi-port diffuser about 950 feet offshore at Latitude 122 degrees 29 minutes 00 seconds, Longitude 39 degrees 04 minutes 00 seconds. The discharge is in the intertidal zone adjacent to the former Hamilton Air Force Base. During the summer prohibition period, June 1 through August 30 annually, the effluent is held in reclamation ponds for sprinkler irrigation on Discharger-controlled pasture lands.

### Existing Permit Limits

6. The existing permit contains final effluent limits for copper, mercury, and nickel, interim effluent limits for copper and mercury, and provisions for a time schedule to attain compliance with the final effluent limits for those two pollutants. These limits and compliance dates are depicted in Table 1, below.

Table 1. Final and interim limits contained in the existing permit.

Constituent	Units	Final Limits		Interim Limits		Compliance Date
		Daily Average	Monthly Average	Daily Average	Monthly Average	
Copper	µg/L	4.9		22		May 25, 2006
Mercury	µg/L		0.025		0.052	May 25, 2006
Nickel	µg/L	7.1				n/a

7. The Discharger requested at a March 5, 2002 meeting that the Regional Board consider certain amendments to the existing permit, as discussed in Finding 9, below. The amendments requested by the Discharger are consistent with NPDES permits adopted for other, similar WWTPs.
8. Section 13263(e) of the Porter-Cologne Water Quality Control Act [1998] allows permits to be reopened, stating in part:

“ Upon application by any affected person, or on its own motion, the Regional Board may review and revise requirements. All requirements shall be reviewed periodically.”

### Scope of Order

9. Based on Regional Board staff's evaluation of the Discharger's request (as further described in the Permit Amendments, below) this Order contains the following amendments to the existing permit:

- evaluation of whether copper, mercury and nickel have reasonable potential to cause or contribute to exceedences of water quality objectives (have reasonable potential), as determined pursuant to Section 1.3, and other provisions, of the State Water Resource Control Board's *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (the State Implementation Policy - the SIP) as adopted on March 2, 2000.
- recalculation of final water quality based effluent limits (WQBELs) for copper and mercury, consistent with SIP Section 1.4;
- statistical evaluation of the feasibility of the Discharger immediately complying with the recalculated WQBELs;
- reassessment of interim effluent limits and compliance schedules, consistent with SIP Section 2.1, where immediate attainment of final WQBELs is infeasible;
- relocation of the ammonia monitoring point from the individual plants (Novato Treatment Plant, E-001, and Ignacio Treatment Plant, E-002) to the combined discharge outfall (E-003); and
- reducing the monitoring frequency for settleable matter from five times per week to monthly and increasing the monitoring frequency for total suspended solids (TSS) and biochemical oxygen demand (BOD<sub>5</sub>, 20 °C) to five times per week.

#### **Antidegradation and Antibacksliding**

10. This Order contains interim performance-based effluent limits (IPBLs) for copper and mercury, and continues the current interim mass-based effluent limit for mercury. Interim limits are not subject to antibacksliding requirements, pursuant to State Water Resources Control Board Water Quality Order No. 2001-06. The copper IPBL complies with antidegradation requirements and with antibacksliding, to the extent that it is applicable, because it is the same as the IPBL contained in the permit as adopted.

The mercury IPBL is higher than the IPBL contained in the permit as adopted (0.087 µg/L vs. 0.052 µg/L), and the mercury mass-based effluent limit is the same as that contained in Order No. 99-036. The interim mercury IPBL and mass-based effluent limit comply with antibacksliding requirements and with antibacksliding, to the extent that it is applicable, because the mass-based effluent limit will hold the WWTPs' mercury loading to San Pablo Bay to current levels. Additionally, in the event that antibacksliding applies, the mercury IPBL is subject to the exception in Section 402(o)(2)(B)(i) of the Clean Water Act because it is based on new information developed since the permit was adopted. The new information is contained in the June 11 2001 *Staff Report, Statistical Analysis of Pooled Data from Region-Wide Ultra-clean Mercury Sampling* (the June 2001 staff report).

#### **CEQA and Public Notice of Action**

11. This Order serves as an amendment to NPDES Permit No. CA0037958, adoption of which is exempt from the provisions of Chapter 3 (commencing with Section 21100) of Division 13 of the Public Resources Code [California Environmental Quality Act (CEQA)] pursuant to Section 13389 of the California Water Code.

12. The Discharger and interested agencies and persons have been notified of the Regional Board's intent to amend the requirements for the existing discharge and have been provided an opportunity to submit their written comments and recommendations. The Regional Board's responses to comments (attached) are hereby incorporated by reference.
13. The Regional Board, in a public meeting, heard and considered all comments pertaining to the discharge.

**IT IS HEREBY ORDERED** that Order No. 99-036 is amended as described in the following items. To distinguish the original language contained in Order No. 99-036 from that contained in this Order, amendments are highlighted by underlining additions and ~~striking through~~ deletions, except for those specified as "Add," "Remove," or "Replace." All numbered elements of the existing permit shall be considered as having been renumbered to accommodate additions and deletions contained in this permit amendment.

## Permit Amendments

### 1. Replace Finding 15 with:

- 15. Water quality objectives, criteria, effluent limitations, and calculations contained in this Order are based on the statutes, documents, and guidance detailed in Section III of the attached Fact Sheet, which is incorporated here by reference.

### 2. Remove Findings 17 and 18.

### 3. Amend Finding 26 to read:

26. *Water Quality Based Effluent Limitations.* Toxic substances are regulated by water quality based effluent limitations (WQBELs) derived from the Regional Board's June 21, 1995 *Water Quality Control Plan San Francisco Bay Basin (Region 2)* (the Basin Plan), Tables 3-3 and 3-4, USEPA national water quality criteria listed in Basin Plan Tables 3-3 and 3-4, the U.S. EPA's May 18, 2000 *Water Quality Standards: Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California* (the California Toxics Rule, or the CTR), the U.S. EPA's *National Toxics Rule* (the NTR), the ~~USEPA Gold Book~~, and/or best professional judgment as defined in Section III of the attached Fact Sheet. Further details about the effluent limitations contained in this Permit are given below and in the attached Fact Sheet.

### 4. Replace Finding 28 with:

#### 28. Reasonable Potential Analyses

Title 40 CFR Section 122.44(d)(1)(i) requires NPDES permits to include limits for all pollutants which have the reasonable potential to cause or contribute to an exceedence of an applicable water quality standard (that have reasonable potential). In 1999, Regional Board staff conducted a complete reasonable potential analysis using effluent data from 1996 to 1998 (the 1999 RPA) to evaluate the whether the effluent had reasonable potential with respect to one or more of the toxic priority pollutants. Regional Board staff used the State Board's draft *Proposed Policy for Implementation of Toxics Standards for Inland Surface Water, Enclosed Bays, and Estuaries in California* (Draft SIP, September 1997) and U.S. EPA guidance documents for the 1999 RPA. Where there were no State-adopted water quality objectives promulgated at that time, the 1999 RPA employed the U.S. EPA Gold Book, a Regional Board site-specific copper study, and the Basin Plan narrative objective for tributyltin. The

1999 RPA employed the conservative assumption that the discharge receives no dilution, consistent with the shallow water discharge finding, above. Numeric final WQBELs were calculated for each of the priority pollutants determined to have reasonable potential. Table 2, below, depicts partial results of the 1999 RPA.

Table 2. Results of 1999 RPA and Effluent Limits Contained in the Current NPDES Permit.

Constituent	99% PEQ, µg/L	WQO, µg/L	Reasonable Potential ?	Final WQBELs	
				Daily Average, µg/L	Monthly Average, µg/L
Copper	74	4.9	yes	4.9	
Mercury	1.26	0.025	yes		0.025
Lead	5.6	5.6	yes	5.6	
Nickel	18	7.1	yes	7.1	
Selenium	1	5	no		
Silver	4.4	2.3	yes	2.3	
Zinc	68.8	58	yes	58	
Phenol	12	30	no		
Tributyltin	no data	0.04	no		
PAHs	all values N.D., above WQO	0.049	no		
Cyanide	57	5	yes	5.0	
Arsenic	3.6	36	no		
Cadmium	1.12	9.3	no		
Chromium	19.2	50	no		

- a. In 2002, Regional Board staff conducted a limited RPA on copper, mercury and nickel effluent data from May 1999 through April 2002 using procedures in Section 1.3 of the SIP (the 2002 RPA). Pursuant to Section 1.3 of the SIP, the 2002 RPA does not include dilution for any pollutant. A complete RPA will be conducted in 2004 as part of the Discharger's NPDES permit renewal process.
  - i. The RPA identifies the observed maximum concentration (MEC) in the effluent for each pollutant, based on effluent concentration data.
  - ii. There are three triggers in determining reasonable potential:
    - 1) The first trigger is activated if the MEC is greater than the lowest applicable WQO ( $MEC \geq WQO$ ), which has been adjusted for pH and translator data, if appropriate. If the MEC is greater than the adjusted WQO, then that pollutant has reasonable potential, and a WQBEL is required.
    - 2) The second trigger is activated if the observed maximum ambient background concentration (B) is greater than the adjusted WQO ( $B > WQO$ ), and either:
      - i) the MEC is less than the adjusted WQO ( $MEC < WQO$ ), or

- ii) the pollutant was not detected in any of the effluent samples and all of the detection levels are greater than or equal to the adjusted WQO.

If B is greater than the adjusted WQO, then a WQBEL is required.

- 3) The third trigger is activated if a review of other information determines that a WQBEL is required to protect beneficial uses, even if both MEC and B are less than the WQO. A limit may be required under certain circumstances to protect beneficial uses.

- b. Table 3, below, depicts the results of the 2002 RPA. The 2002 RPA findings, numeric final WQBELs where required, feasibility determinations, and interim limits and compliance schedules – as appropriate - are set out in more detail in Findings 34 and 35, below.

Table 3. Results of 2002 RPA results and limit calculations.

Constituent	Water Quality Objective, $\mu\text{g/L}$	MEC, $\mu\text{g/L}$	Reasonable Potential	WQBELs, $\mu\text{g/L}$		Immediate Attainment Feasible?	IPBLs, $\mu\text{g/L}$	
				MDEL	AMEL		Daily Max.	Monthly Avg.
Copper	3.7 <sup>[1]</sup>	19	Yes <sup>[2]</sup>	4.9	2.4	No	22	
Mercury	0.025	0.101	Yes <sup>[2]</sup>	0.041	0.025	No	[3]	0.087
Nickel	7.1	6.9	No	n/r <sup>[4]</sup>	n/r <sup>[4]</sup>	n/a	n/r <sup>[4]</sup>	n/r <sup>[4]</sup>

Footnotes to Table 3.

- WQO derived from CTR saltwater criterion of 3.1  $\mu\text{g/L}$  and default translator of 0.83 contained in the CTR.
- Reasonable potential by trigger 1), above (MEC > WQO).
- Only monthly average IPBL computed for mercury –see June 11, 2001 *Staff Report, Statistical Analysis of Pooled Data from Region-Wide Ultra-clean Mercury Sampling* (the June 2001 staff report)
- No reasonable potential, therefore WQBELs not required (n/r) (see Table A in the attached Fact Sheet).

## 5. Replace Finding 29 with:

### 29. Constituents Identified in the 303(d) List

On May 12, 1999, the U.S. EPA approved a revised list of impaired water bodies prepared by the State (the 303(d) list), prepared pursuant to provisions of Section 303(d) of the federal Clean Water Act. Section 303(d) of the Clean Water Act requires identification of specific water bodies where it is expected that water quality standards will not be met after implementation of technology-based effluent limitations on point sources. San Pablo Bay is listed as impaired by:

- chlordane,
- copper,
- DDT,
- diazinon,
- dieldrin,
- dioxin and furan compounds,



- exotic species,
- mercury,
- nickel,
- total PCBs,
- PCBs (dioxin like), and
- selenium.

**6. After Finding 29, add:**

**30. Assimilative Capacity**

Section 2.1.1 of the SIP states that for bioaccumulative compounds on the 303(d) list, the Regional Board should consider whether there is additional assimilative capacity or if mass loadings should be limited to current levels. The Regional Board finds that mass loading limits are warranted for certain bioaccumulative compounds on the 303(d) list for the receiving waters of this discharge (e.g., mercury). Mass loading limits will ensure that this discharge does not contribute further to impairment of the narrative objective for bioaccumulation.

**31. Total Maximum Daily Loads (TMDLs) and Waste Load Allocations (WLAs)**

- a. The Regional Board plans to adopt Total Maximum Daily Loads (TMDLs) for pollutants on the 303(d) list in San Francisco Bay – including San Pablo Bay - no later than 2010, with the exception of dioxin and furan compounds. The Regional Board defers development of the TMDLs for dioxin and furan compounds to the U.S. EPA. Future review of the 303(d) list for San Francisco Bay may result in revision of the schedules and/or provide schedules for other pollutants.
- b. The TMDLs will establish waste load allocations (WLAs) for point sources such as the Discharger's WWTP and load allocations (LAs) for non-point sources, and will result in achieving the water quality standards for the listed waterbodies. Final effluent WQBELs for 303(d)-listed pollutants in this discharge will be based on WLAs contained in the respective TMDLs.

**32. Interim Limits and Compliance Schedules**

- a. Section 2.1.1 of the SIP states:

“ the compliance schedule provisions for the development and adoption of a TMDL only apply when: ...(b) the Discharger has made appropriate commitments to support and expedite the development of the TMDL. In determining appropriate commitments, the RWQCB should consider the discharge's contribution to current loadings and the Discharger's ability to participate in TMDL development.”

The discharger agreed to assist the Regional Board in TMDL development through active participation in and contribution to the Bay Area Clean Water Agencies (BACWA). The Regional Board adopted Resolution No. 01-103, on September 19, 2001, authorizing the Executive Officer of the Regional Board to enter into a Memorandum of Understanding with BACWA and other parties to accelerate the development of Water Quality Attainment Strategies, including TMDLs, for the San Francisco Bay-Delta and its tributaries.

- b. The SIP and the Basin Plan authorize compliance schedules in a permit for an existing discharge if the Discharger cannot comply immediately with a new, more stringent effluent limitation. This Order establishes a 5-year compliance schedule for copper, as allowed by the CTR and Section 2.2 of the SIP for effluent limits based on CTR or NTR WQCs. This Order establishes a compliance schedule until March 31, 2010 for mercury, as allowed by the Basin Plan. The Basin Plan provides for a 10-year compliance schedule for new standards, commencing on the effective date of the new standard. This provision has been construed as authorizing compliance schedules where new interpretations of existing standards (such as the Basin Plan's numeric water quality objectives) result in more stringent limits than were contained in previous permits. Using SIP methodologies to recalculate limits based on Basin Plan WQOs is considered to be a new interpretation of those WQOs, and some of the recalculated limits are more stringent than those contained in the current permit. Therefore, the Basin Plan provision for compliance schedules is applicable. The Regional Board may take appropriate enforcement actions if interim limits and requirements are not met.
- c. Both the SIP and the Basin Plan require the Discharger to demonstrate the infeasibility of achieving immediate compliance with the new limits to qualify for a compliance schedule, and to submit the following documentation to the Regional Board supporting a finding of infeasibility:
- Descriptions of the Discharger's diligent efforts to quantify pollutant levels in the discharge, pollutant sources into the waste stream, and those efforts' results;
  - Descriptions of source control and/or pollution minimization efforts currently under way or completed;
  - A proposed schedule for additional or future source control measures, pollutant minimization or waste treatment; and
  - A demonstration that the proposed schedule is as short as practicable.

Until final WQBELs or WLAs are adopted for 303(d)-listed pollutants, state and federal anti-backsliding and antidegradation policies and the SIP require that the Regional Board include interim effluent limitations for them. The interim effluent limitations will be the lower of either current plant performance or the previous permit's limit(s). The mercury interim performance-based limit (IPBL) is based on the results of the 2001 staff report on the statistical analysis of pooled ultraclean mercury data from over 25 municipal wastewater dischargers throughout the Region, as described in Finding 35, below.

- d. In addition to interim mercury concentration limits, this Order continues the interim performance-based mercury mass limitation to maintain the discharge's current mass loadings of mercury, a 303(d)-listed bioaccumulative pollutant with reasonable potential.
- e. On July 5, 2002, the Discharger submitted a feasibility study (the July 5, 2002 Feasibility Study), asserting it is infeasible to immediately comply with the WQBELs calculated according to SIP Section 1.4 for copper and mercury. Regional Board staff conducted a statistical analysis of recent WWTP performance data with respect to these metals (see Section IV.A.6 of the attached Fact Sheet). Based on that statistical analysis, the Regional Board concurs with the July 5, 2002 Feasibility Study. Therefore, this Order establishes compliance schedules for copper and mercury that extend beyond one year. The SIP requires the Regional Board to establish interim numeric limitations and interim requirements to

control these pollutants. This Order establishes interim limits for copper and mercury based on the previous permit limit or WWTP performance, whichever is more stringent, as described in the findings for specific pollutants, below. Specific bases for these interim limits are described in the findings for each pollutant, and in the Provisions, below.

Also, the Discharger has conducted a mercury source identification study that identified hospitals, dentists, mercury thermometers and certain other household products as significant mercury sources for which reduction strategies are available. It is estimated that up to a 51% reduction in mercury loadings to the Novato Treatment Plant and up to a 32% reduction in mercury loadings to the Ignacio plant may be achieved through pollution prevention. The District is implementing mercury pollution prevention measures as described in Provision E.4. in order to minimize mercury loadings.

- f. Since the compliance schedules for CTR criteria and Basin Plan numeric water quality objectives both extend beyond the May 25, 2004 expiration date of the existing permit, the actual final WQBELs for these pollutants are included in the findings of this permit for reference only.

### 33. Antidegradation and Antibacksliding

The interim limits included in this permit comply with anti-degradation requirements and, to the extent they may apply, anti-backsliding requirements because they hold the Discharger to current facility performance, and because the final limits comply with anti-backsliding requirements.

## 5. Replace Finding 30 with:

### 34. Copper

- a. *RPA Results* This Order establishes effluent limits for copper because the 19 µg/L maximum effluent concentration in the data set (the MEC) exceeds the governing WQO of 3.7 µg/L, demonstrating reasonable potential by Trigger 1, above. The governing WQO is based on the CTR's WQO of 3.1 µg/L for chronic saltwater protection as modified by using the CTR's default copper translator of 0.83.
- b. *WQBELs* The copper WQBELs calculated according to SIP procedures are 4.9 µg/L daily maximum and 2.4 µg/L monthly average. As noted in Finding 19, above, these WQBELs are calculated without dilution because this is a shallow-water discharge.
- c. *Immediate Compliance Infeasible* The July 5, 2002 Feasibility Study asserts the Discharger cannot immediately comply with these WQBELs. Regional Board staff statistically analyzed the Discharger's effluent data from May 1999 through April 2002 and determined that the assertion of infeasibility is substantiated for copper (see Section IV.A.6 and Table D of the attached Fact Sheet for detailed results of the statistical analysis).
- d. *IPBLs* Because it is infeasible for the Discharger to immediately comply with the copper WQBELs, an IPBL is required. Regional Board staff conducted a statistical analysis of recent WWTP effluent data. Historically, IPBLs have been referenced to the 99.87<sup>th</sup> percentile value of recent performance data. Statistical analysis indicates the 99.87<sup>th</sup> percentile value of the WWTPs' recent copper effluent data is 24 µg/L, which is higher than

the 22 µg/L IPBL developed for Order No. 99-036. Therefore, the 22 µg/L IPBL adopted in Order No. 99-036 is retained in the this Order..

- e. *Plant Performance and Attainability* During the period May 1999 through April 2002, the WWTPs' effluent MEC for copper was 19 µg/L. Since all effluent copper values were below the 22 µg/L IPBL, it is feasible for the WWTPs to comply with the IPBL.
- f. *Term of IPBLs* The copper IPBLs shall remain in force until March 31, 2008 or until the Regional Board amends the limits based on additional data, site-specific objectives, or the Waste Load Allocation in the TMDL. However, during the next permit reissuance, Regional Board staff may re-evaluate the copper IPBLs.

**6. Renumber Finding 31 and replace it with:**

**35. Mercury**

- a. *RPA Results* This Order establishes limits for mercury because the 0.101 µg/L mercury MEC exceeds the governing WQO of 0.025 µg/L, demonstrating reasonable potential by Trigger 1, above. The governing WQO is based on the Basin Plan's 4-day average saltwater objective (Basin Plan Table 3-3, pg. 3-9).
- b. *WQBELs* The mercury WQBELs calculated according to SIP procedures are 0.041 µg/L daily maximum and 0.025 µg/L monthly average. As noted in Finding 19, above, these WQBELs are calculated without dilution because this is a shallow-water discharge.
- c. *Immediate Compliance Infeasible* The July 5, 2002 Feasibility Study asserts the Discharger cannot immediately comply with the mercury WQBELs. Regional Board staff statistically analyzed the Discharger's effluent data from May 1999 through April 2002 and determined that the assertion of infeasibility is substantiated for mercury (see Section IV.A.6 and Table D of the attached Fact Sheet for detailed results of the statistical analysis).
- d. *IPBL* Due to the infeasibility of the Discharger immediately complying with the mercury WQBELs, this amendment establishes a mercury IPBL of 0.087 µg/L. The 2001 staff report identified two statistically derived interim performance-based effluent limits for mercury, 0.023 µg/L for advanced secondary treatment plants and 0.087 µg/L for secondary treatment plants. Since the Discharger operates secondary treatment plants, the appropriate interim performance-based effluent limit for them is 0.087 µg/L.
- e. *Interim Mercury Mass Emission Limit* In addition to the concentration-based mercury IPBL, this Order continues the annual mercury mass loading limit of 0.655 kilograms per year (kg/yr) and monthly mercury maximum mass loading (or "trigger") of 0.032 kilograms per month (kg/mo), as further described in Effluent Limitation B.8. The mass loading trigger initiates additional actions if exceeded, as specified in Provision 5, and is based on the highest calculated 12-month moving average load using discharge season flows.
- f. *Plant Performance and Attainability* During the period May 1999 through April 2002, the Discharger's combined effluent mercury concentrations ranged from 0.005 µg/L to 0.101 µg/L and averaged 0.022 µg/L. Although the mercury MEC exceeds the IPBL, Regional Board staff's evaluation of the discharge data indicate that the concentration-

based IPBL is attainable. This evaluation is discussed in more detail in Sections IV.A.6 and IV.A.9 of the attached Fact Sheet. During that same time period, the 12-month moving average mercury mass emissions ranged from 0.16 kg/yr (0.013 kg/mo) to 0.23 kg/yr (0.019 kg/mo). Based on these results, the annual average mass loading limit and trigger values should be attainable by the WWTPs.

- g. *Expected Final Mercury Limits* The final mercury WQBELs and the interim mass emission limitation will be revised to be consistent with the WLA assigned in the adopted mercury TMDL. While the TMDL is being developed, the Discharger will comply with performance-based mercury concentration and mass-based limits to cooperate in maintaining current ambient receiving water conditions. Based on the June 30, 2000 Regional Board staff report titled *Watershed Management of Mercury in the San Francisco Bay Estuary: Total Maximum Daily Load Report to U.S. EPA*, municipal sources are a very small contributor of the mercury load to the Bay. Because of this, it is unlikely that the TMDL will require reduction efforts beyond the source controls required by this permit.

#### 7. Amend Effluent Limitation 1a to read:

1. The effluent from E-001 and E-002, combined into a common outfall and discharged to San Pablo Bay during the wet weather period, defined as the period from November 1 through April 30 of each year, and each discharge monitored separately and individually, shall not exceed the following limits in Table 1.a.:

- a. Conventional Pollutant Effluent Limitations for the period of November 1 through April 30 of each year:

Constituent	Units	Annual Average	Monthly Average	Weekly Average	Daily Maximum	Instantaneous Maximum
Biochemical Oxygen Demand (BOD <sub>5</sub> , 20°C)	mg/L		30	45	<del>60</del>	--
Total Suspended Solids	mg/L		30	45	<del>60</del>	--
Settleable Matter	ml/L-hr		0.1	--	<del>0.2</del>	<del>0.2</del>
Oil & Grease	mg/L		10	--	20	--
Chlorine Residual <sup>1</sup>	mg/L		--	--	--	0.0
<del>Total Ammonia as N</del>	<del>mg/L</del>	<del>4.0</del>	<del>6.0</del>			

<sup>1</sup> Requirement defined as below the limit of detection in standard test methods defined in the 18<sup>th</sup> edition of *Standard Methods for the Examination of Water and Wastewater*, and applied after dechlorination (may be applied to combined effluent, E-003).

At times before and after the "wet weather period" defined above, the following effluent limits in Table 1.b. will be applied to E-001 and E-002 separately, when discharge occurs, with the exception described in 1.c.:

- b. Conventional Pollutants Effluent Limitations for any discharge prior to November 1 or after April 30 of each year:

Constituent	Units	Annual Average	Monthly Average	Weekly Average	Daily Maximum	Instantaneous Maximum
Biochemical Oxygen Demand (BOD <sub>5</sub> , 20°C)	mg/L		15		30	
Oil and Grease	mg/L		5		15	
Total Suspended Solids	mg/l		10		20	
Settleable Matter	mL/L/hr		0.1		0.2	0.2
Chlorine Residual <sup>1</sup>	mg/L					0.0
Total Ammonia as N	mg/L	4.0	6.0			

<sup>1</sup> Requirement defined as below the limit of detection in standard test methods defined in the 18<sup>th</sup> edition of *Standard Methods for the Examination of Water and Wastewater*, and applied after dechlorination (may be applied to combined effluent, E-003).

At times before and after the “wet weather period” defined above, the following effluent limits in Table 1.c. will be applied to E-002 separately, when discharge occurs. The Ignacio Treatment Plant will have 99.7th percentile performance based interim limits for BOD and TSS, listed on the last two rows of the table, until the 0.5 MGD capacity transfer and plant upgrade is operational. After the plant upgrade is operational, the BOD and TSS limits for Ignacio will be those listed in Table 1.b

- c. Interim Performance Based Conventional Pollutants Effluent Limitations for Ignacio Treatment Plant, E-002 discharge prior to November 1 or after April 30 of each year.

Constituent	Units	Annual Average	Monthly Average	Weekly Average	Daily Maximum	Instantaneous Maximum	Time Schedules
Oil and Grease	mg/L		5		15		
Settleable Matter	mL/L/hr		0.1		0.2	0.2	
Chlorine Residual <sup>1</sup>	mg/L					0.0	
Total Ammonia as N	mg/L	4.0	6.0				
Interim Biological Oxygen Demand (BOD <sub>5</sub> , 20°C)	mg/L		22		44		March 31, 2008 <sup>[1]</sup>
Interim Total Suspended Solids	mg/L		23		46		March 31, 2008 <sup>[1]</sup>

Footnote for Table 1c:

1. These time schedules are subject to compliance with the conditions of Provision E.9, below.

#### 8. Insert after Effluent Limitation Table 2:

5. The ammonia in the combined effluent shall not exceed 4.0 mg/L as an annual average nor 6.0 mg/L as a monthly average.

**9. Amend Effluent Limitation 7 to read:**

7.a. Toxic Substances Effluent Limitations: The discharge of combined effluent containing constituents in excess of the following limitations is prohibited [a]:

<i>Constituent</i>	<i>Units</i>	<i>Daily Average [b]</i>	<i>Monthly Average [b]</i>
Copper	µg/L	4.9	
Lead [d]	µg/L	5.6	
Mercury	µg/L		0.025
Nickel [d]	µg/L	7.1	
Silver	µg/L	2.3	
Zinc [d]	µg/L	58	
Cyanide [c]	ug/l	5.0	

b. Interim Effluent Limitation: The following interim limits shall apply ~~in lieu of the above limits~~ until the date specified in the time schedule below and according to Provisions 3 and 4 for copper and mercury, respectively [a].

<i>Constituent</i>	<i>Units</i>	<i>Daily Average Maximum [b]</i>	<i>Monthly Average [b]</i>	<i>Time Schedule</i>
Copper	µg/L	22 <del>[e]</del>		<u>May 25, 2006</u> <u>March 31, 2008</u>
Mercury	ug/l		<u>0.052[f]</u> <u>0.087</u>	<u>May 25, 2006</u> <u>March 31, 2010</u>

**Footnotes:**

- a. All analyses shall be performed using current USEPA Methods, as specified in USEPA Water/Wastewater Methods (EPA-600 Series), except that mercury analyses may be performed using USEPA Method 1631. Metal limits are expressed as total recoverable metals.
- b. Limits apply to the average concentration of all samples collected during the averaging period (Daily - 24-hour period; Monthly - Calendar month).
- c. The discharger may demonstrate compliance with this limitation by measurement of weak acid dissociable cyanide.
- d. Effluent limitation may be met as a 4-day average. If compliance is to be determined based on a 4-day average, then concentrations of four 24-hour composite samples shall be reported, as well as the average of four.
- e. ~~The interim copper limit will become effective in accordance with the compliance schedule specified in Provision 3. The WQBEL established in 7.a. shall become effective in 7 years unless a revised WQBEL is established prior to that time. The copper limit is based on the 99.7th percentile of the January 1996 through December 1998 data. This limit is solely for the purposes of this permit and only for the duration specified in the permit.~~
- f. ~~The interim limit in 7.b. shall apply for mercury until either a revised WQBEL is established or the 7-year compliance schedule is over, at which time the limit specified in 7.a. shall apply. The mercury limit is based on the 95<sup>th</sup> percentile of the 1996 through 1998 data. This limit is solely for the purposes of this permit and only for the duration specified in the permit. The interim mercury limits will become effective with the compliance schedule specified in Provision 3.~~

**10. Replace Provision E.4 with:**

The District has implemented an aggressive source control program for mercury as documented in the following submittals to the Regional Board:

- Mercury Reduction Study Plan, July 1999
- Mercury Source Reduction Final Report, November 2001
- Mercury Reduction Pollution Prevention Plan and Schedule, July 2002

As described in the above reports, the estimated load from mercury sources in the service area were identified by sampling for mercury in residential and commercial areas, conducting literature review, developing a business inventory and water use records. The study also evaluated the potential for optimizing mercury removal in the treatment process. This information was then used to identify the most effective means of reducing mercury concentrations in the discharge including 1) reducing discharge of amalgam waste from dentists, 2) reducing the discharge of mercury from medical clinics and laboratories, and 3) encouraging the disposal of household mercury-containing products at the District's household hazardous waste facility.

The District also participates in regional efforts to implement a mercury pollution prevention program including the North Bay Watershed Association Water Quality Committee and the Bay Area Pollution Prevention Group of the Bay Area Clean Water Agencies.

The mercury reduction program is being implemented in accordance with the following time schedule.

<b>Tasks</b>	<b>Compliance Date</b>
1. Develop and maintain a database of dental offices, medical clinics and laboratories.	June 30, 2003
2. Implement semi-annual outreach visits, newsletters, or events targeting mercury discharge minimization for these organizations.	December 1, 2003
3. Implement semi-annual outreach efforts including newsletters or events informing households and businesses of proper disposal of mercury-containing products in conjunction with the District's Household Hazardous Waste Facility.	January 1, 2004
4. Document the mercury pollution prevention program in the District's Semi Annual Pollution Prevention Report.	July 15, 2003
5. Document the mercury pollution prevention program in the District's Annual Pollution Prevention Report.	January 15, 2004

**11. Replace Provision E.9 with:****9. Compliance schedule for conventional effluent limitations at Ignacio Plant**



By April 30, 2004, the Discharger shall submit a workplan, acceptable to the Executive Officer, detailing the tasks and time schedule required for the Ignacio plant to attain compliance with the technology-based effluent limits for Biochemical Oxygen Demand (BOD<sub>5</sub>, 20°C) and Total Suspended Solids (TSS) as depicted in 1b, above. The workplan shall identify measures that will enable the Discharger to accelerate progress towards the compliance with the final technology-based limits within the shortest timeframe possible, and before the March 31, 2008 compliance schedule ends.

**After Provision E.9 add:**

**10. 303(d)-listed Pollutants Site-Specific Objective and TMDL Status Review**

The Discharger shall participate in the development of a TMDL or site-specific objective for copper, mercury, selenium, 4,4'-DDE, and dieldrin. By January 31 of each year, the Discharger shall submit an update to the Board to document its participation efforts toward development of the TMDL(s) or site-specific objective(s). The Discharger's may meet this update requirement by continuing its participation in BACWA's cooperative efforts to accelerate development of Water Quality Attainment Strategies, as described in Finding 32, above. However, should BACWA not submit its required progress reports on time, then the Discharger will remain responsible for the annual progress update. This Order may be reopened in the future to reflect any changes required by TMDL development.

**13. Amend Table 1 of the Self Monitoring Program to read:**

Sampling Station:	A-1\ A-2	E-001-D\E-002-D				E-003			P	C	O
Type of Sample:	C-24	G	C-24	Co	G	C-2	Co	Ob	G	Ob	
Parameter (units) [notes]	[1]	[2]	[2]	[2]	[2]	[2]	[2]	[1]	[2]	[1]	
Flow Rate (mgd) [3]	D			D							
BOD <sub>5</sub> (mg/L & kg/d) - [4]	1/W 3/W		3/W								
Total Susp. Solids (mg/l & kg/d) - [4]	1/W 5/W		3/W 5/W								
Chlorine Residual (mg/L) [5]						Co					
Settleable Matter (ml/L-hr)		5/W	M								
Oil & Grease (mg/L & kg/d) - lbs/day [6]		M									
Total Coliform (MPN/100 ml)		3/W									
Acute Toxicity (% Surv.) [7]						M					
Chronic Toxicity [8]						3M					
Ammonia Nitrogen (mg/L & kg/d)		3/W			3/W						
pH (units)		5/W									
Temperature (°C)		5/W									
Dissolved Oxygen (mg/l & % Sat)		5/W									
Sulfides, Total & Dissolved (mg/L/l) (if D.O. < 2.0 mg/L/l)		5/W									
All Applicable Standard Observations								M		E	

Footnotes and legends for SMP Table 1 are unmodified.

**14. Order Effective Date, Expiration and Reapplication**

This Order shall become effective May 1, 2003, provided the U.S. EPA Regional Administrator has no objection. If the U.S. EPA Regional Administrator objects to its issuance, the permit shall not become effective until such objection is withdrawn.

This Order expires on May 25, 2004.

In accordance with Title 23, Chapter 3, Subchapter 9 of the California Administrative Code, the Discharger must file a report of waste discharge no later than 180 days before the expiration date of this Order as application for reissue of this permit and waste discharge requirements.

I, Loretta K. Barsamian, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on April 16, 2003.



LORETTA K. BARSAMIAN

Executive Officer

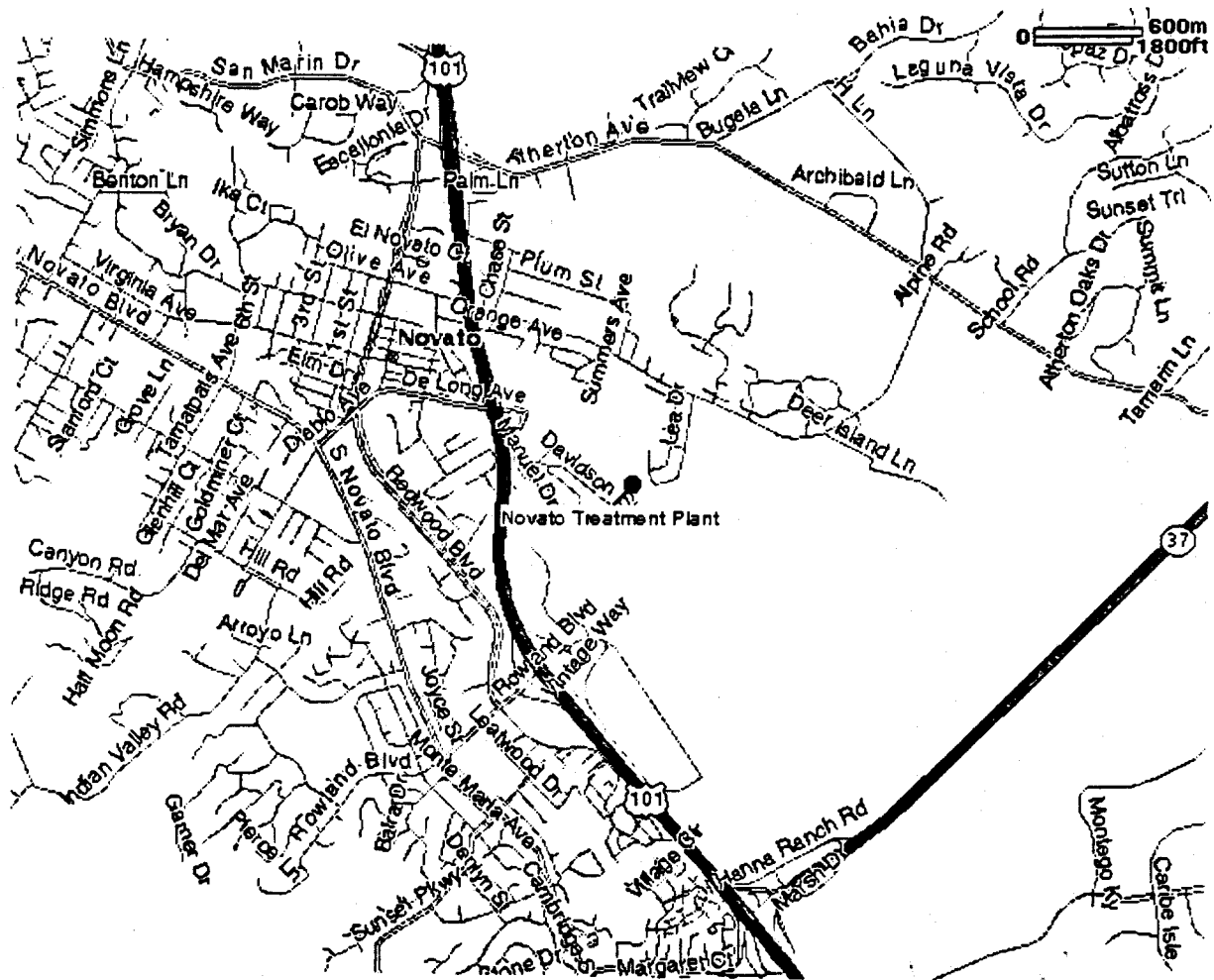
Attachment A: Facility Location Map

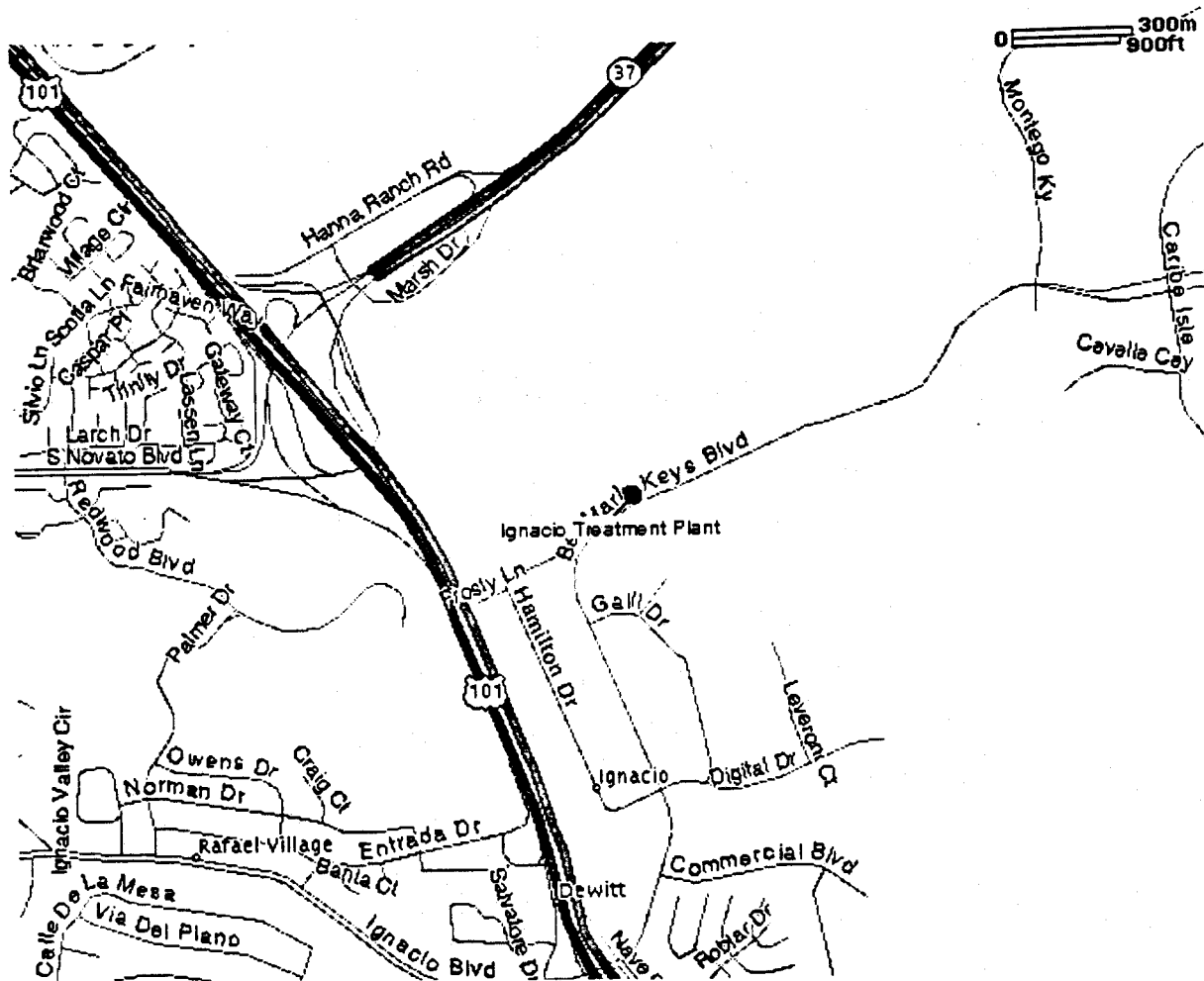
Attachment B: List of online references

Attachment C: Fact Sheet

Attachment D: Novato Sanitary District's July 5, 2002 Feasibility Study

**Attachment A**  
**Facility Location Maps**





**Attachment B**

**List of online references**

## **Standard Language And Other References Available Online**

### **Document**

### **URL**

Standard Provisions and Reporting  
Requirements, August 1993

<http://www.swrcb.ca.gov/~rwqcb2/Agenda/04-17-02/res74-10standprov.doc>

Board Resolution No. 74-10: Policy Regarding  
Waste Discharger's Responsibilities to Develop  
and Implement Contingency Plans to Assure  
Continuous Operation of Facilities for the  
Collection, Treatment and Disposal of Waste

<http://www.swrcb.ca.gov/~rwqcb2/Agenda/04-17-02/res74-10.doc>

Staff Report: Statistical Analysis of Pooled Data  
from Regionwide UltraClean Mercury Sampling  
for Municipal Dischargers

<http://www.swrcb.ca.gov/~rwqcb2/Agenda/04-17-02/potwhgstatisticreport.pdf>

August 6, 2001 Regional Board letter:  
Requirement for Monitoring of Pollutants in  
Effluent and Receiving Water to Implement New  
Statewide Regulations and Policy

<http://www.swrcb.ca.gov/~rwqcb2/Agenda/04-17-02/sip13267final.doc>

**Attachment C**

**Fact Sheet**



**CALIFORNIA REGIONAL WATER QUALITY CONTROL REGIONAL BOARD**

**SAN FRANCISCO BAY REGION**

**FACT SHEET**

**for**

**AMENDMENT TO NPDES PERMIT and WASTE DISCHARGE REQUIRMENTS FOR:**

**NOVATO SANITARY DISTRICT**

**NOVATO**

**MARIN COUNTY**

**NPDES PERMIT NO. CA0037958**

## I. PUBLIC NOTICE:

### Written Comments

- Interested persons are invited to submit written comments concerning this draft permit amendment.
- Comments must be submitted to the Regional Board no later than 5:00 p.m. on March 22, 2003.

### Public Hearing

- The Tentative Order will be considered for adoption by the California Regional Water Quality Control Board, San Francisco Region (the Regional Board) at a public hearing during the Regional Board's regular monthly meeting at: Elihu Harris State Office Building, 1515 Clay Street, Oakland, CA; 1st floor Auditorium.
- This meeting will be held on: April 16, 2003, starting at 9:00 am.

### Additional Information

- For additional information about this matter, interested persons should contact Regional Board staff member **Mr. Ken Katen**, Phone: (510) 622-2485; email: [kk@rb2.swrcb.ca.gov](mailto:kk@rb2.swrcb.ca.gov)

## II. INTRODUCTION

This Fact Sheet contains information regarding an amendment to the waste discharge requirements and National Pollutant Discharge Elimination System (NPDES) permit for Novato Sanitary District for discharges from its secondary level wastewater treatment plants. This Fact Sheet describes the factual, legal, and methodological basis for the proposed permit amendment and provides supporting documentation to explain the rationales and assumptions used in deriving the limits contained in the permit amendment.

### A. Discharge Description

Novato Sanitary District (the Discharger) requested that the Regional Board amend its NPDES permit for discharge of pollutants into San Pablo Bay, a water of the State.

The Discharger owns and operates two municipal wastewater treatment facilities, the Novato Treatment Plant (E-001) and the Ignacio Treatment Plant (E-002), referred to collectively as the WWTPs. The WWTPs collect sanitary waste from a primarily residential service area serving the Novato area. The population of the service area is about 50,000.

The Novato Treatment Plant processes wastewater by primary clarification, activated sludge, secondary clarification, nitrification, gravity filtration, and disinfection with chlorine. The actual treatment processes used may vary depending on influent flow. The Novato Plant's average dry weather flow (ADWF) of 4.53 MGD includes treatment with all unit processes. Wet weather flows up to 9 MGD receive complete treatment. Wet weather flows between 9 MGD and 16 MGD receive primary treatment plus gravity filtration and disinfection. Wet weather flows above 16 MGD receive only gravity filtration and disinfection.

The Ignacio Treatment Plant processes wastewater by primary clarification, biofiltration with trickling filters, secondary clarification, nitrification, gravity filtration and disinfection with chlorine. The treatment processes vary depending on influent flow. The Ignacio Plant's ADWF of 2.02 MGD includes treatment with all unit processes. Wet weather flows up to 4.04 MGD receive complete treatment. Wet weather flows above 4.04 MGD receive primary treatment plus nitrification, gravity filtration and disinfection.

#### **B. Discharge Point**

During the discharge season, September 1 through May 31 annually, combined effluent from both plants is dechlorinated and discharged from a combined outfall (E-003) through a multi-port diffuser about 950 feet offshore at Latitude 122 degrees 29 minutes 00 seconds, Longitude 39 degrees 04 minutes 00 seconds. The discharge is in the intertidal zone adjacent to the former Hamilton Air Force Base. Because this is a shallow water discharger, discharge is prohibited during three summer months, from June 1 through August 31 (the summer prohibition period). During the summer prohibition period, June 1 through August 31 annually, the effluent is held in reclamation ponds for sprinkler irrigation on Discharger-controlled pasture lands. The summer prohibition period is limited to three months because the discharge's impact is thought to be minimal immediately before and after the dry weather season, due to there probably being some dilution year round under most circumstances. The discharger presently discharges an average dry weather flow of 5.4 million gallons per day (MGD), from the combined plants into San Pablo Bay, a water of the State and the United States.

#### **C. Receiving Water Salinity**

Effluent limitations contained in this permit amendment are based on marine (salt water) water quality objectives, based on a comparison of San Pablo Bay salinity data to requirements in the Basin Plan and the CTR.

The Regional Board's June 21, 1995 *Water Quality Control Plan San Francisco Bay Basin (Region 2)* (the Basin Plan) requires freshwater effluent limitations for discharges into receiving waters with salinity below 5 parts per thousand (ppt) at least 75 percent of the time, and saltwater effluent limitations for discharges into receiving waters with salinity greater than 5 ppt at least 75 percent of the time in a normal water year. The Basin Plan further states that for discharges to waters with salinities between these two categories, or to tidally influenced freshwater that supports estuarine beneficial uses, effluent limitations shall be the lower of the marine or freshwater effluent limitation, based on ambient hardness.

The U.S. EPA's May 18, 2000 *Water Quality Standards; Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California* (the California Toxics Rule – the CTR) states that freshwater criteria shall apply for discharges to waters with salinities equal to or less than one ppt at least 95 percent of the time, and saltwater criteria for discharges to waters with salinities equal to or greater than 10 ppt at least 95 percent of the time in a normal water year. For discharges to water with salinities in between these two categories, or tidally influenced freshwaters that support estuarine beneficial uses, the criteria shall be the lower of the saltwater or freshwater (calculated based on ambient hardness) criteria, for each substance.

San Pablo Bay (the receiving water) salinity data for discharge months (September through May annually) during the period from March 1993 through February 2000 (see referenced Table 4) show that the receiving water salinity is below 5 ppt 27 percent of the time and above 5 ppt 73 percent of

the time. Similarly, there were no receiving water salinities detected below 1 ppt (0 percent of the time) and salinities above 10 ppt were detected 47 percent of the time during discharge months. Thus, by both Basin Plan and CTR requirements, the receiving water is an estuarine water body.

Copper and nickel are hardness-dependent, so the appropriate WQOs or WQCs were determined after taking hardness into account. The CTR's copper WQCs are depicted based on hardness of 100 mg/L as calcium carbonate (100 mg/L as  $\text{CaCO}_3$ ), and the lowest hardness reported in the receiving water was 138 mg/L as  $\text{CaCO}_3$  (see referenced Table 5). Because the hardness adjustment increases the WQC as hardness increases, the hardness-adjusted freshwater copper WQCs for the receiving water are higher than the CTR's saltwater WQCs (see referenced Table 6). Therefore, the CTR's saltwater copper Chronic Continuous Concentration of 3.1  $\mu\text{g/L}$  governed the calculation of the copper WQBELs.

Mercury is not hardness-dependent, and the Basin Plan's 0.025  $\mu\text{g/L}$  4-day average saltwater WQO for mercury is equal to its 4-day freshwater WQO, and both are lower than the CTR's human-health-based WQC, so the Basin Plan 4-day saltwater WQO governs the calculation of the mercury WQBELs.

The Basin Plan's 7.1  $\mu\text{g/L}$  24-hour averaged saltwater nickel WQO is lower than the hardness-adjusted freshwater WQOs (see referenced Table 6), so the 24-hour averaged nickel WQO was used to complete the nickel reasonable potential analysis, as described in Section IV.A.1, below.

### III. General Rationale and Regulatory Bases

Water quality objectives, criteria, effluent limitations, and calculations contained in the amended permit are based on:

- Sections 301 through 305, and 307 of the Federal *Water Pollution Control Act*, and amendments thereto, as applicable;
- The Regional Board's June 21, 1995 *Water Quality Control Plan San Francisco Bay Basin (Region 2)* (the Basin Plan);
- The State Board's March 2, 2000 *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (the State Implementation Plan or SIP), and as subsequently approved by the Office of Administrative Law and the U.S. EPA;
- The U.S. EPA's May 18, 2000 *Water Quality Standards; Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California* (the California Toxics Rule – the CTR);
- The U.S. EPA's National Toxics Rule as promulgated [Federal Register Volume 57, 22 December 1992, page 60848] and subsequently amended (the NTR);
- The U.S. EPA's *Quality Criteria for Water* [EPA 440/5-86-001, 1986], and subsequent amendments, (the U.S. EPA Gold Book);
- applicable Federal Regulations [40 CFR Parts 122 and 131];
- 40 CFR Part 131.36(b) and amended [Federal Register Volume 60, Number 86, 4 May 1995, pages 22229-22237];

- the U.S. EPA's December 10, 1998 *National Recommended Water Quality Criteria* compilation [Federal Register Vol. 63, No. 237, pp. 68354-68364]; and
- Regional Board staff's Best Professional Judgment (BPJ), as defined by:
  - the Basin Plan
  - U.S. EPA Region 9's February 1994 *Guidance For NPDES Permit Issuance*;
  - U.S. EPA's March 1991 *Technical Support Document for Water Quality Based Toxics Control* (the TSD);
  - U.S. EPA's October 1, 1993 *Policy and Technical Guidance on Interpretation and Implementation of Aquatic Life Metals Criteria*;
  - U.S. EPA's July 1994 *Whole Effluent Toxicity (WET) Control Policy*;
  - U.S. EPA's August 14, 1995 *National Policy Regarding Whole Effluent Toxicity Enforcement*;
  - U.S. EPA's April 10, 1996 *Clarifications Regarding Flexibility in 40 CFR Part 136 Whole Effluent Toxicity (WET) Test Methods*;
  - U.S. EPA Regions 9 & 10's May 31, 1996 *Guidance for Implementing Whole Effluent Toxicity Programs Final*;
  - U.S. EPA's February 19, 1997 *Draft Whole Effluent Toxicity (WET) Implementation Strategy*.

#### IV. Specific Rationale

##### A. Basis for Effluent Limitations

##### 1. Reasonable Potential Analysis:

- i. *RPA Methodology*: Code of Federal Regulations Title 40, Part 122.44(d)(1)(i) (40 CFR 122.44(d)(1)(i)) specifies that permits must include water quality based effluent limits (WQBELs) for all pollutants "which the Director determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard" (have reasonable potential). Thus, assessing whether a pollutant has reasonable potential is the fundamental step in determining whether or not a WQBEL is required. The following sections describe the reasonable potential analysis (RPA) and the RPA results for copper, mercury, and nickel.
- ii. *WQOs and WQCs*: The RPA uses Basin Plan Water Quality Objectives (WQOs), including narrative toxicity objectives, and applicable water quality criteria (WQCs) in the CTR and/or NTR. The governing WQOs and WQCs for this RPA are depicted in Table A, below.
- iii. *Methodology*: The RPA uses the methods and procedures prescribed in SIP Section 1.3. Regional Board staff analyzed the effluent data, described in iv., below, to determine if the

discharge has reasonable potential for copper, mercury, and nickel. The referenced Table 1 (Reasonable Potential Analysis), shows the step-wise process described in SIP Section 1.3.

- iv. *Effluent and background data:* The RPA is based on effluent data collected by the Discharger during the period May 1999 – April 2002, as shown in the referenced Table 2 (Priority Pollutant Data). Water-quality data collected from San Francisco Bay at the Yerba Buena Island and Richardson Bay monitoring stations through the Regional Monitoring Program between 1992 and 1998 were reviewed to determine the maximum observed background values as shown the referenced Table 3 (Ambient Background). These background data are considered representative for the receiving water because the Yerba Buena Island and Richardson Bay Stations better fit the SIP's guidance for ambient background, compared to other stations in the Regional Monitoring Program. The SIP states that background data are applicable if they are "representative of the ambient receiving water column that will mix with the discharge." Board Staff believe that data from these stations are representative of water that will mix with the discharge from Outfall 003. Although these stations are located near the Golden Gate, they would represent the typical water flushing in and out in the Bay Area each tidal cycle. For most of the Bay Area, the waters represented by these stations make up a large part of the receiving water that will mix with the discharge.
- v. *RPA determination:* The RPA results for copper, mercury, and nickel are shown in Table A, below (and in the referenced Table 1 (RPA)). Copper and mercury had reasonable potential, nickel did not. For comparison, the existing Permit's effluent limitations for those three metals are shown in Table C, below.

Table A. Summary of Reasonable Potential Results

# in CTR	PRIORITY POLLUTANTS	MEC or Minimum DL (µg/L)	Maximum Background (µg/L)	Governing WQO/WQC (ug/L)	RPA Results <sup>1</sup>
6	Copper	19.1	2.45	3.7 <sup>2</sup>	Yes
8	Mercury	0.101	0.006	0.025 <sup>3</sup>	Yes
9	Nickel	6.87	3.5	7.1 <sup>4</sup>	No

Footnotes for Table B.

1. RP = Yes, if either MEC or Background > WQO.  
RP = No, if both MEC and background < WQO.
2. Based on CTR salt water CCC value of 3.1 µg/L and default CTR translator of 0.83.
3. Based on Basin Plan 4-day average, Table 3-3 on page 3-9.
4. Based on Basin Plan 24-hour averaged value, Table 3-3 on page 3-9.

## 2. Dilution

The receiving water is a shallow, tidally influenced water body. Therefore, consistent with the provisions of the Basin Plan (pg. 4-12) no dilution was considered when calculating the effluent limits.

### 3. Assimilative Capacity, Mass Loading, and Mass Emission Limits

The permit amendment contains a mass emission limit for mercury because the Regional Board has determined that there is no additional assimilative capacity for mercury in San Francisco Bay. This determination is consistent with SIP Section 2.1.1 requirements that the Regional Board consider whether additional assimilative capacity exists for 303(d)-listed bioaccumulative pollutants. That determination also considered the fact that a fish consumption advisory currently exists to protect human health from elevated mercury concentrations in fish taken from San Francisco Bay.

### 4. Water Quality Based Effluent Limitations

Water quality based effluent limitations (WQBELs) were calculated for copper and mercury consistent with procedures contained in SIP Section 1.4. These WQBELs are depicted in Table B, below.

Table B. WQBELs, feasibility, interim limits and compliance schedules

Constituent	WQBELs		Feasible? (Y/N)	Interim Performance Based Effluent Limits Monthly Average, µg/L	Compliance Schedule and Basis
	AMEL <sup>[1]</sup> µg/L	MDEL <sup>[2]</sup> µg/L			
<b>Copper</b>	2.4	4.9	No	22	March 31, 2008, CTR
<b>Mercury</b>	0.025	0.041	No	0.087	March 31, 2010, Basin Plan

Footnotes to Table B.

1. Average Monthly Effluent Limit, calculated as prescribed in SIP Section 1.4
2. Maximum Daily Effluent Limitation, calculated as prescribed in SIP Section 1.4.

### 5. Comparison to Previous Permit Limits

The existing Permit's effluent limitations for copper, mercury, and nickel are depicted in Table C, below. The nickel effluent limit is discontinued because there is no demonstration of reasonable potential for nickel, and no WQBEL is required. The MDEL for copper, shown in Table B, above, is the same as the previously calculated monthly average, and the AMEL is added consistent with SIP requirements. The MDEL for mercury is higher than the previously calculated daily average value, and the AMEL is added consistent with SIP procedures. The mercury IPBL is a monthly average to be consistent with other mercury IPBLs set for other dischargers, based on Regional Board staff's June 11, 2001 *Staff Report, Statistical Analysis of Pooled Data from Region-Wide Ultra-clean Mercury Sampling* (the referenced staff report).

Table C. Previous permit limits for copper and nickel.

Constituent	Final WQBELs		Interim Performance-Based Limit	
	Monthly Average, µg/L	Daily Average, µg/L	Monthly Average, µg/L	Daily Average, µg/L
Copper	4.9	--	--	22
Mercury	--	0.025	0.052	--
Nickel	--	7.1	--	--

## 6. Feasibility Evaluation

Based on a statistical evaluation of the Discharger's copper and mercury data from May 1999 through April 2002, Regional Board staff concurred with the Discharger's July 5, 2002 feasibility study's assertion of infeasibility for copper and mercury. The results of the statistical study are presented in Table D, below. The statistical evaluation assessed the normality or ln-normality of the data, computed the 95<sup>th</sup> and 99<sup>th</sup> percentiles of the data, and compared those values to the AMEL and MDEL, respectively. These percentile values are consistent with guidance contained in SIP Section 1.4. If either the 95<sup>th</sup> or 99<sup>th</sup> data percentile was greater than the AMEL or MDEL, respectively, then the assertion of infeasibility was concurred with.

Table D. Results of statistical feasibility evaluation.

Constituent	AMEL, µg/L	95 <sup>th</sup> Percentile, µg/L	MDEL, µg/L	99 <sup>th</sup> Percentile, µg/L	Immediate Compliance Feasible? (Y/N)
Copper	2.4	17	4.9	20	No
Mercury*	0.025	0.034	0.041	0.043	No

\*Footnote to Table D: See section F, below, for discussion of the attainability of the mercury IPBL.

## 7. Interim Performance Based Concentration Limits and Compliance Schedules

Because the Discharger demonstrated the infeasibility of immediately complying with the WQBELs, the permit amendment establishes interim performance-based concentration limits (concentration-based IPBLs) for copper and mercury and compliance schedules for attainment of the final copper and mercury WQBELs. The interim concentration-based IPBLs and compliance schedules are shown in Table B, above. The SIP requires that interim limits be the more stringent of either the previous permit's limits or the IPBLs. The SIP also requires the inclusion of appropriate provisions for source control in these cases.

Antidegradation and, to the extent it applies, antibacksliding, require that the interim permit limits be based on either recent plant performance, or the existing permit limits as adopted in 1999. For determining recent plant performance, Board staff have historically computed the 99.87<sup>th</sup> percentile value of recent plant performance. As shown in Table C, above, the current permit's interim copper limit is 22 µg/L. Statistical analysis indicates the 99.87<sup>th</sup> percentile of recent copper effluent data for



the WWTPs is 24 µg/L. Therefore, the current Permit copper IPBL of 22 µg/L is retained in this Amendment.

The mercury IPBL is based on the results contained in the referenced staff report. The mercury IPBL contained in the referenced staff report is a monthly average of 0.087 µg/L for secondary wastewater treatment plants. Since the Discharger operates secondary treatment plants discharging into the combined effluent, the mercury IPBL is 0.087, taken as a monthly average.

#### **8. Interim Performance Based Mercury Mass Emission Limit**

This amendment continues the existing permit's interim mercury mass-based effluent limitation of 0.655 kilograms per year. This mass-based effluent limitation will maintain current mercury loadings to San Francisco Bay until the mercury TMDL is established. The final mass-based mercury effluent limitation will likely be based on the WLA contained in the mercury TMDL.

#### **9. Attainability of IPBLs**

##### **i. Copper**

The maximum observed effluent copper concentration during the period May 1999 – April 2002 was 19 µg/L, which is less than the IPBL of 22 µg/L. Therefore, the IPBLs should be consistently and immediately attainable.

##### **ii. Mercury**

The original data set of effluent mercury concentrations were not normal or ln-normal enough to permit reliable estimation of percentiles for comparison to the mercury IPBL. However, the mercury IPBL of 0.087 µg/L is based on a statistical analysis of pooled ultraclean mercury data from a number of secondary-level wastewater treatment plants. Also, the mean effluent mercury concentration observed in the WWTP's effluent during the period May 1999 – April 2002 was 0.020 µg/L. Therefore, the IPBL is expected to be attainable. During that same time period, the 12-month average mercury mass emissions ranged from 0.16 kg/yr (0.013 kg/mo) to 0.23 kg/yr (0.019 kg/mo). Based on these results, the annual average mass loading limit and trigger values should be attainable by the WWTPs.

#### **B. Basis for Ammonia Compliance Point**

The ammonia effluent limit is a WQBEL, and the appropriate location of its compliance point is the combined outfall rather than the individual plant outlets. Compliance with WQBELs is appropriately monitored at the combined outfall because they are related to potential impacts to receiving water quality, not to plant performance. Technology-based effluent limits, such as BOD, TSS, and percent removal are good indicators of actual plant operating conditions. Therefore, technology-based effluent limits will continue to be monitored at each individual treatment plant (Ignacio and Novato) to assess individual plant performance.

#### **C. Basis for Settleable Matter Monitoring Frequency**

Current knowledge indicates that TSS is a better indicator of proper WWTP functioning for solids removal than settleable matter and therefore, based on Board staff's best professional judgement, settleable matter monitoring is reduced from weekly in the previous permit to monthly in this one. At

the same time, TSS monitoring frequencies are increased from 3 times per week to 5 times per week to help assure consistent plant performance.

## **V. WRITTEN COMMENTS**

- Interested persons are invited to submit written comments concerning this draft permit.
- Comments should be submitted to the Board no later than **5:00 P.M. on March 22, 2003.**
- Comments received after that date may not receive full consideration in the formulation of final determinations of permit conditions.
- Comments should be submitted to the Board at the address given on the first page of this fact sheet, and addressed to the attention of **Ken Katen.**

## **VI. WASTE DISCHARGE REQUIREMENT APPEALS**

Any person may petition the State Water Resources Control Board to review the decision of the Board regarding these Waste Discharge Requirements. A petition must be made within 30 days of the Board public hearing.

## **VII. REFERENCED TABLES**

Table 1. Reasonable Potential Analysis

Table 2. Effluent Pollutant Data, May 1999 – April 2002

Table 3. Ambient Background Data

Table 4. Receiving Water Salinity Data

Table 5. Receiving Water Hardness Data

Table 6. Water Quality Objectives and Water Quality Criteria, Adjusted For Hardness

TABLE 1: Novato Sanitary District Reasonable Potential Analysis  
Regional Board Order No. R2-2003-0029

		Basin Plan Objectives						CTR Water Quality Objectives										
		Saltwater		Freshwater				Saltwater	Health	Acute WQO's		WQO's						
# in CTR	CONSTITUENT NAME	4-day	1-hr	24-Hr. Averaged	Instantaneous Maximum	4-day	1-hr	24-hr avg	Instant Max.	CMC	CCC	Organisms only	Lowest Acute Untranslated	Acute Translator (Default=1)	Lowest Acute, Adjusted	Lowest Chronic, Untranslated	Chronic Translator (Default=1)	Lowest Chronic
6	Copper		4.9			6.5	9.2			5.78	3.1		4.9	1	4.9	3.1	0.83	3.7
8	Mercury	0.025	2.1			0.025	2.4					0.051	2.1	1	2.1	0.025	1	0.0
9	Nickel			7.1	140			56	1100	74	8.3		74	1	74	7.1	1	7.1

TABLE 1: Novato Sanitary District Reasonable Potential Analysis  
Regional Board Order No. R2-2003-0029

Steps in SIP														
Step 1			Step 2			Step 3					Step 4		Step 5	
A blank space or "N/A" means incomplete discharger data														

Existing Permit Limits													z value=
Idl? If all detection limits >WQO, then "idl"				Indeterminacy?	bckgrd > WQO; no=N RP, yes=Y	Final or Interim limit (Yes if any)	RP? Cause of Indeterminacy Y = Yes, N=No, lb=no bckgrd, lo= no WQO, Idl =all	Dilution (enter by hand)	Acute ECA	Acute Sigma	Chronic ECA	Chronic Sigma	Human Health ECA
				No	No	Yes	Yes	0	4.90	0.554513029	3.7349398	0.293560379	-
				No	No	Yes	Yes	0	2.10	0.554513029	0.025	0.293560379	0.051
				No	No	No	No	0	-	0.554513029	-	0.293560379	-

TABLE 1: Novato Sanitary District Reasonable Potential Analysis  
Regional Board Order No. R2-2003-0029

2.326 Sampling Frequency (times per month) = 4 AMEL Z = 1.645 MDEL Z= 2.326 Final Permit Limits, ug/L													
Acute ECA Multiplier	Chronic ECA Multiplier	Acute LTA	Chronic LTA	Lowest LTA Value	Sigma-N	AMEL Multiplier	AMEL Aquatic Life	AMEL Human Health	MDEL Multiplier	MDEL Aquatic Life	MDEL Human Health	Daily Maximum	Monthly Average
0.321083214	0.527433444	1.573307748	1.96993	1.573307748	0.293560379	1.55	2.44244	-	3.11	4.9	-	4.9	2.442442
0.321083214	0.527433444	0.674274749	0.01319	0.013185836	0.293560379	1.55	0.025	0.05100	3.11	0.04107	0.1023156	0.0410667	0.025000
0.321083214	0.527433444	-	-	-	0.293560379	1.55	-	-	3.11	-	-	No RP	No RP

**NOVATO SANITARY DISTRICT**  
**Combined Novato and Ignacio Treatment Plant - Metals Values**

1. All values in ug/l.  
2. All metal samples are flow proportioned, 24-hour composite samples.

DATE	FLOW	Discharge	Copper			Nickel		
		to Bay?	Inf.	Eff.	%Rem.	Inf.	Eff.	%Rem.
04-May-99	5.98	Yes	39	9	76.5	7	5	31.5
01-Jun-99	5.69	No	55	6	89.0	6	5	20.6
06-Jul-99	5.45	No	76	14	81.6	6	6	01.4
03-Aug-99	5.36	No	58	11	80.4	8	5	37.1
07-Sep-99	5.29	No	74	14	80.5	6	5	16.7
12-Oct-99	5.06	Yes	47	9	81.9	6	5	21.9
02-Nov-99	5.18	Yes	46	12	74.4	5	5	00.0
01-Dec-99	5.80	Yes	38	8	78.1	7	5	25.4
04-Jan-00	5.36	Yes	34	11	67.2	5	5	00.0
01-Feb-00	7.55	Yes	22	7	69.9	7	6	18.6
01-Mar-00	9.89	Yes	27	6	77.8	6	5	08.6
04-Apr-00	5.95	Yes	46	10	78.7	5	5	00.0
02-May-00	5.65	Yes	44	9	78.7	5	4	21.7
06-Jun-00	5.58	No	79	11	86.7	7	3	55.2
04-Jul-00	5.45	No	62	9	85.9	7	3	50.6
01-Aug-00	5.22	No	52	13	74.5	5	3	32.7
05-Sep-00	5.35	No	48	10	78.8	5	6	-22.3
03-Oct-00	5.20	Yes	73	12	84.2	5	4	30.8
07-Nov-00	5.10	Yes	49	15	69.6	6	4	33.3
05-Dec-00	5.24	Yes	81	15	81.1	8	3	60.7
02-Jan-01	5.36	Yes	53	13	75.5	8	3	62.9
06-Feb-01	5.96	Yes	36	10	73.0	7	4	46.2
06-Mar-01	9.38	Yes	25	7	72.3	5	4	29.1
03-Apr-01	5.55	Yes	90	14	84.2	8.9	4.6	48.9
01-May-01	5.25	No	64	8	87.2	7.9	3.0	61.9
05-Jun-01	6.19	No	48	12	74.9	6.0	6.4	-06.9
02-Jul-01	7.76	No	41	11	73.1	7.0	6.9	01.2
07-Aug-01	5.26	No	39	12	68.6	4.3	3.4	21.0
04-Sep-01	5.52	No	39	19	51.4	4.2	3.1	25.4
02-Oct-01	5.03	No	44	12	71.9	4.6	3.5	24.1
06-Nov-01	5.05	Yes	39	7	82.0	3.5	2.3	35.9
05-Dec-01	8.82	YES	54	8	85.3	7.1	6.3	11.4
03-Jan-02	17.46	Yes	14	10	29.9	6.5	6.8	-03.7
06-Feb-02	5.96	yes	33	11	65.0	4.4	3.4	21.6
06-Mar-02	6.92	yes	37	14	62.1	5.0	4.0	20.2
10-Apr-02	5.51	yes	43	15	64.4	5.8	4.2	28.2
AVERAGE	5.88		51	11	78.6	6.2	4.6	26.1
MAXIMUM	17.46		90.36	19.08	89.00	8.94	6.87	62.93
MINIMUM	5.03		14.47	6.00	29.94	3.53	2.27	-22.31

mean	11	LTA	1.6
95th percentile	15.33741	AMEL	2.4
99th percentile	17.815246	MDEL	4.9

# in CTR	CONSTITUENT	Maximum Observed Background Value, ug/L (Central Bay RMP Sites)
2	Arsenic	2.22
4	Cadmium	0.127
5b	Chromium	4.4
6	Copper	2.455
7	Lead	0.804
	Lead for CV calculation	
8	Mercury	0.006
9	Nickel	3.5
10	Selenium	0.19
11	Silver	0.068
13	Zinc	4.6
14	Cyanide	N/A
16	2,3,7,8-TCDD (Dioxin)	N/A
17	Acrolein	N/A
18	Acrylonitrile	
19	Benzene	N/A
20	Bromoform	
21	Carbon Tetrachloride	
22	Chlorobenzene	
23	Chlordibromomethane	
24	Chloroethane	
25	2-Chloroethylvinyl Ether	
26	Chloroform	N/A
27	Dichlorobromomethane	
28	1,1-Dichloroethane	
29	1,2-Dichloroethane	
30	1,1-Dichloroethylene	
31	1,2-Dichloropropane	
32	1,3-Dichloropropylene	
33	Ethylbenzene	
34	Methyl Bromide	
35	Methyl Chloride	N/A
36	Methylene Chloride	
37	1,1,2,2-Tetrachloroethane	
38	Tetrachloroethylene	
39	Toluene	N/A
40	1,2-Trans-Dichloroethylene	
41	1,1,1-Trichloroethane	
42	1,1,2-Trichloroethane	
43	Trichloroethylene	
44	Vinyl Chloride	
45	2-Chlorophenol	N/A
46	2,4-Dichlorophenol	N/A
47	2,4-Dimethylphenol	N/A
48	2-Methyl-4,6-Dinitrophenol	N/A



49	2,4-Dinitrophenol	N/A
50	2-Nitrophenol	N/A
51	4-Nitrophenol	N/A
52	3-Methyl-4-Chlorophenol	N/A
53	Pentachlorophenol	N/A
54	Phenol	N/A
55	2,4,6-Trichlorophenol	N/A
56	Acenaphthene	0.0015
57	Acenaphthylene	0.00053
58	Anthracene	0.0005
59	Benzidine	N/A
60	Benzo(a)Anthracene	0.0053
61	Benzo(a)Pyrene	0.0025
62	Benzo(b)Fluoranthene	0.0046
63	Benzo(ghi)Perylene	0.006
64	Benzo(k)Fluoranthene	0.0015
65	Bis(2-Chloroethoxy)Methane	N/A
66	Bis(2-Chloroethyl)Ether	N/A
67	Bis(2-Chloroisopropyl)Ether	N/A
68	Bis(2-Ethylhexyl)Phthalate	N/A
69	4-Bromophenyl Phenyl Ether	N/A
70	Butylbenzyl Phthalate	N/A
71	2-Chloronaphthalene	N/A
72	4-Chlorophenyl Phenyl Ether	N/A
73	Chrysene	0.0041
74	Dibenzo(a,h)Anthracene	0.0006
75	1,2 Dichlorobenzene	N/A
76	1,3 Dichlorobenzene	N/A
77	1,4 Dichlorobenzene	N/A
78	3,31-Dichlorobenzidine	N/A
79	Diethyl Phthalate	N/A
80	Dimethyl Phthalate	N/A
81	Di-n-Butyl Phthalate	N/A
82	2,4-Dinitrotoluene	N/A
83	2,6-Dinitrotoluene	N/A
84	Di-n-Octyl Phthalate	N/A
85	1,2-Diphenylhydrazine	N/A
86	Fluoranthene	0.007
87	Fluorene	0.002078
88	Hexachlorobenzene	N/A
89	Hexachlorobutadiene	N/A
90	Hexachlorocyclopentadiene	N/A
91	Hexachloroethane	N/A
92	Indeno(1,2,3-cd) Pyrene	0.004
93	Isophorone	N/A
94	naphthalene	0.00229
95	Nitrobenzene	N/A
96	N-Nitrosodimethylamine	N/A
97	N-Nitrosodi-n-Propylamine	N/A
98	N-Nitrosodiphenylamine	N/A

99	Phenanthrene	0.0061
100	Pyrene	0.0051
101	1,2,4-Trichlorobenzene	N/A
102	Aldrin	N/A
103	alpha-BHC	N/A
104	beta-BHC	N/A
105	gamma-BHC	N/A
106	delta-BHC	N/A
107	Chlordane	0.00018
108	4,4-DDT	0.000066
109	4,4-DDE	0.00069
110	4,4-DDD	0.000313
111	Dieldrin	0.000264
112	alpha-Endosulfan	0.000031
113	beta-Endosulfan	0.000069
114	Endosulfan Sulfate	0.000011
115	Endrin	0.000016
116	Endrin Aldehyde	N/A
117	Heptachlor	0.000019
118	Heptchlor Epoxide	0.000094
119 -125	PCBs	N/A
126	Toxaphene	N/A
	Tributyltin	N/A
	Chlorpyrifos	N/A
	Diazinon	N/A

Table 4. Novato Sanitary District Receiving Water Salinity Data  
Regional Board Order No. R2-2003-0029

Station Code	Station	Date	Cruise	Salinity (by SCT), o/oo
BD20	San Pablo Bay	3/4/93	1993-03	6.1
BD20	San Pablo Bay	5/26/93	1993-05	16.3
BD20	San Pablo Bay	9/15/93	1993-09	25.7
BD20	San Pablo Bay	2/7/94	1994-01	20
BD20	San Pablo Bay	4/26/94	1994-04	21.9
BD20	San Pablo Bay	2/13/95	1995-02	11.7
BD20	San Pablo Bay	4/19/95	1995-04	7
BD20	San Pablo Bay	2/12/96	1996-02	3.9
BD20	San Pablo Bay	4/22/96	1996-04	9
BD20	San Pablo Bay	1/27/97	1997-01	0.4
BD20	San Pablo Bay	4/21/97	1997-04	NA
BD20	San Pablo Bay	2/2/98	1998-01	4.2
BD20	San Pablo Bay	4/14/98	1998-04	3.7
BD20	San Pablo Bay	2/8/99	1999-02	6.9
BD20	San Pablo Bay	4/19/99	1999-04	12.2
BD20	San Pablo Bay	2/7/00	2000-02	10.5

Number of quantified Data	15
---------------------------	----

Number below 5 ppt	4
Percent below 5 ppt	27%
Percent above 5 ppt	73%

Number below 1 ppt	0
Percent below 1 ppt	0%

Number above 10 ppt	7
Percent above 10 ppt	47%

4/16/2003

Table 5: Novato Sanitary District, Receiveing Water Hardness Data  
Regional Board Order No. R2-2003-0029

Station Code	Station	Date	Cruise	Hardness mg/L
BD20	San Pablo I	3/4/93	1993-03	NA
BD20	San Pablo I	5/26/93	1993-05	NA
BD20	San Pablo I	9/15/93	1993-09	NA
BD20	San Pablo I	2/7/94	1994-01	NA
BD20	San Pablo I	4/26/94	1994-04	NA
BD20	San Pablo I	8/22/94	1994-08	NA
BD20	San Pablo I	2/13/95	1995-02	NA
BD20	San Pablo I	4/19/95	1995-04	NA
BD20	San Pablo I	8/21/95	1995-08	NA
BD20	San Pablo I	2/12/96	1996-02	720
BD20	San Pablo I	4/22/96	1996-04	NA
BD20	San Pablo I	7/24/96	1996-07	NA
BD20	San Pablo I	1/27/97	1997-01	138
BD20	San Pablo I	4/21/97	1997-04	NA
BD20	San Pablo I	8/4/97	1997-07	NA
BD20	San Pablo I	2/2/98	1998-01	767
BD20	San Pablo I	4/14/98	1998-04	674
BD20	San Pablo I	7/27/98	1998-07	NA
BD20	San Pablo I	2/8/99	1999-02	1260
BD20	San Pablo I	4/19/99	1999-04	2390
BD20	San Pablo I	7/19/99	1999-07	3780
BD20	San Pablo I	2/7/00	2000-02	2000
BD20	San Pablo I	7/17/00	2000-07	4160

Minmum Hardness: 138 mg/L as CaCO3

## Minimum Receiving Water

Hardness  
(mg/L CaCO3)  
pH (s.u.)138 For Cd, Cr(III), Cu, Pb, Ni, Ag, Zn - not applicable to Hg, Se  
7.8

# in CTR	PRIORITY POLLUTANTS	Lowest (most stringent) Criteria ° ug/L	Basin Plan Objectives (ug/L)- Regional Board 2										CTR Water Quality Criteria (ug/L)														
			Freshwater					Saltwater					Freshwater					Saltwater									
			from Table 4-3		3-4)			(from Table 3-3)			Freshwater		Saltwater			Human Health for consumption of:		Freshwater Criteria			Saltwater Criteria						
			Shallow Water (24-hr) ug/L	Deep Water (24-hr) ug/L	4-day	1-hr	24-hr	Max	4-day	1-hr	24-hr	Max	CMC (acute) ug/L	CCC (chronic) ug/L	CMC (acute) ug/L	CCC (chronic) ug/L	Water & organisms only ug/L	Organisms only ug/L	ma	ba	mc	bc	freshwater acute criteria	freshwater chronic criteria	saline acute criteria	saline chronic criteria	
8	Copper	3.10			15.570	24.010							18.98	12.29	4.8	3.1	1,350.00		0.9422	-1.7000	0.8545	-1.7020				0.83	0.83
8	Mercury (not hardness-dependent)	0.025			0.025	2.4											0.050										
8	Nickel	7.10			237.05	1862.47	56	1,100					515.13	88.56	74	9.2	4,800		0.8480	2.2550	0.8480	0.8584			0.997	0.99	0.98

**Attachment D**

**Novato Sanitary District's July 5, 2002 Feasibility Study**

July 5, 2002

Mr. Ken Katen, P.E.  
San Francisco Regional Water  
Quality Control Board  
1515 Clay Street, Suite 1400  
Oakland, CA 94612

**Subject: Permit Appeal for Novato Sanitary District, NPDES Permit No. CA0037958**

Dear Mr. Katen:

The District is hereby submitting a feasibility study and proposed pollution prevention schedule in accordance with the agreement reached at our meeting on March 5, 2002.

The proposed final effluent limit for copper is taken from your reasonable potential analysis for copper and nickel provided in your email of June 20, 2002. Your analysis found that there is reasonable potential for copper, and final limits calculated per SIP would be 4.9 ug/L daily maximum and 2.4 ug/L average monthly. The copper interim performance-based limit would be 24 ug/L based on statistical analysis of the data.

Your analysis found that there is no reasonable potential for nickel in the combined discharge, so the Regional Board would not set a final limit for it.

As we also agreed at the meeting on March 5<sup>th</sup>, Novato Sanitary District requests the following modifications to the permit:

- relocate the ammonia limitations to the combined effluent;
- change monitoring frequency for settleable solids to monthly.

If you have any questions or need further information regarding this Feasibility Study prepared by the District, please contact Beverly James at (415) 892-1694 ext. 111, bevj@novatosan.com.

Sincerely,

Thomas Selfridge  
Manager-Engineer

Attachment

**NOVATO SANITARY DISTRICT**  
**NPDES PERMIT NO. CA0037958**  
**FEASIBILITY STUDY AND PROPOSED COMPLIANCE SCHEDULE FOR COPPER**  
**AND MERCURY**

**BACKGROUND**

The requirement for feasibility studies as a way to document the need for interim effluent limits was first suggested on May 3, 2001, and further defined in a May 11, 2001, meeting between representatives of Bay area dischargers, the RWQCB, the U. S. Environmental Protection Agency (USEPA), and the State Water Resources Control Board (SWRCB). Five Bay Area dischargers submitted feasibility studies to the RWQCB in May and had their permits adopted in June, with effluent limits based on those studies. It is the District's understanding that those studies were sufficient to prove inability to comply with the proposed final water quality-based effluent limits. Hence, this analysis is generally based on those previous examples.

It is the District's understanding that the District must demonstrate that it is infeasible to meet the final effluent limits for the two COCs listed above in order to be granted a compliance schedule and interim effluent limits in the amended NPDES permit. If the District believes it is infeasible to meet a California Toxic Rule (CTR)/State Implementation Policy (SIP) water quality-based effluent limit, then the SIP procedures should be followed. Similarly, water quality-based effluent limits based on the Basin Plan should follow procedures outlined in the 1995 Basin Plan. The RWQCB will determine if a compliance schedule and interim limits are appropriate, based on the discharger's submittal. If the RWQCB agrees that immediate compliance is infeasible, and that all the conditions are met, a compliance schedule and interim limit can be established on a constituent-by-constituent basis.

There are two bases for the feasibility analysis:

- 1) the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays and Estuaries of California (known as the SIP - March 2000) which establishes statewide policy for NPDES permitting, and
- 2) the RWQCB's Basin Plan, 1995.

The SIP provides for the situation where an existing NPDES discharger cannot immediately comply with an effluent limitation derived from a California Toxics Rule (CTR) criterion. The SIP allows for the adoption of interim effluent limits and a schedule to achieve compliance with a water quality-based effluent limit in such cases. To qualify for interim limits and a compliance schedule, the discharger must request and/or demonstrate that it is appropriate to establish interim requirements for implementation of CTR criterion.

The term "infeasible" is defined in the SIP as "not capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors."



The SIP requires that the following information be submitted to the RWQCB to support a finding of infeasibility:

- Documentation that diligent efforts have been made to quantify pollutant levels in the discharge and sources of the pollutant in the waste stream, including the results of those efforts;
- Documentation of source control and/or pollution minimization efforts currently underway or completed;
- A proposed schedule for additional or future source control measures, pollutant minimization, or waste treatment; and
- A demonstration that the proposed schedule is as short as practicable.

The SIP requires that interim numeric effluent limits be based on (a) current treatment facility performance or (b) limits in the existing permit, whichever is more stringent.

The SIP also requires that compliance schedules be limited to specific time periods. For constituents not on the 303(d) list, the maximum length of the compliance schedule is five years from the date of permit issuance. For constituents on the 303(d) list (where a TMDL is required to be prepared), the maximum length of the compliance schedule is 20 years from the effective date of the SIP (March 2000). To secure the TMDL-based compliance schedule, the discharger must make commitments to support and expedite development of the associated TMDL.

In similar fashion, when a NPDES discharger cannot immediately comply with an effluent limitation from a Basin Plan criterion, the Basin Plan allows the RWQCB to consider the discharger's proposals for longer compliance schedules where the revised effluent limitation will not be immediately met. The Basin Plan justification for compliance schedules is essentially the same as the SIP procedure. Both procedures require implementation of pollution prevention measures to reduce COC loadings to the maximum extent practicable as soon as possible.

## **CONSTITUENTS TO BE EVALUATED**

The constituents for which the District requests interim effluent limits are copper and mercury.

## **PROPOSED WATER QUALITY-BASED EFFLUENT LIMITS AND CURRENT PLANT PERFORMANCE FOR CONSTITUENTS OF CONCERN**

The proposed final effluent limits and the District's effluent quality are summarized in Table 2 for the constituents of concern. Effluent quality is based on data for the combined effluent for sampling conducted between May 1999 and April 2002. It is the District's understanding that the water quality-based effluent limits shown in Table 2 are calculated using procedures described in Section 1.4 of the SIP. Background values (maximum or average, as appropriate for the COC in question) were derived from Regional Monitoring Program (RMP) data collected at two Central Bay stations (Yerba Buena Island and Richardson Bay). Dilution was assumed to be zero.

TABLE 2				
CONSTITUENT OF CONCERN	FINAL WATER QUALITY-BASED EFFLUENT LIMITS		NOVATO COMBINED EFFLUENT QUALITY <sup>3</sup>	
	AMEL <sup>1</sup>	MDEL <sup>2</sup>	MEAN	MEC <sup>4</sup>
Copper, ug/L	2.4	4.9	11	19.1
Mercury, ug/L	0.025		0.024	0.144

1 Average monthly effluent limit

2 Maximum daily effluent limit

3 Data set timeframe for metals is May 1999-April 2002

4 MEC = Maximum Effluent Concentration observed in the data set [see Section 1.3 of the SIP]

### COMPLIANCE WITH FINAL WATER QUALITY-BASED EFFLUENT LIMITS FOR CONSTITUENTS OF CONCERN

As shown in Table 2, based upon current treatment plant performance as measured using WWTP effluent, the District is not able to immediately comply with proposed final effluent limits for the two COCs. As a result, interim effluent limits and a compliance schedule to attempt to meet final limits should be granted in the amended Novato NPDES permit.

Novato combined effluent characteristics for copper indicate that compliance with the final effluent limits assigned to Novato is unlikely. The MEC concentration would result in permit violations at the proposed AMEL and MDEL. Therefore, interim effluent limits for copper and a compliance schedule to attempt to meet final copper limits should be granted in the amended NPDES permit.

Novato combined effluent characteristics for mercury indicate that compliance with the final effluent limits assigned to Novato is unlikely. The MEC concentration would result in permit violations at the proposed AMEL and MDEL. Therefore, interim effluent limits for mercury and a compliance schedule to attempt to meet final mercury limits should be granted in the amended NPDES permit.

Interim limits requested by the District are listed in Table 3.

TABLE 3		
CONSTITUENT OF CONCERN	INTERIM EFFLUENT LIMITS	BASIS
Total Copper, ug/L	26.2	Plant performance
Total Mercury, ug/L	0.087	Pooled data for secondary treatment plants <sup>1</sup>

<sup>1</sup> Katen, K., SFRWQCB. Staff Report - Statistical Analysis of Pooled Data From Regionwide Ultraclean Mercury Sampling For Municipal Dischargers. June 11, 2001

The Interim Performance-Based Limit (IPBL) for copper was determined by the District based on effluent data from May 1999 – April 2002. The IPBL was determined to be 26.2 µg/L using methods consistent with the Regional Board's recommended methodology as discussed below.

For copper, the distribution of the data was evaluated using normal probability plots and regression statistics. The data was found to be log-normally distributed. The IPBL was calculated by estimating values three standard deviations above the mean of the Ln-transformed data (equivalent to the 99.87<sup>th</sup> percentile), as specified in the Regional Board's method. The value based on the Ln-transformed data is back-transformed (exponentiated) to the original concentration units to provide the IPBL. The summary statistics and calculated IPBLs are shown in Table 4.

**Table 4. Summary Statistics and Estimated IPBL for Copper in Effluent**

Copper in Novato Effluent, µg/L	
n	36
Percent detected	100.0%
n detected	36
Mean	11.01
Standard Deviation	3.04
Minimum Detected Value	6
Maximum Detected Value	19.1
Minimum Reporting Limit	NA
Maximum Reporting Limit	NA
Beta_1 (slope)	0.3022
Beta_0 (intercept)	2.3608
Correlation Coefficient (r)	0.9923
Basis for IPBL	
Estimated IPBL = $e^{(\mu_y + 3 \cdot SD_y)}$ , where $y = \text{Ln}(\text{copper, } \mu\text{g/L})$	26.2 µg/L

## REVIEW OF FEASIBILITY TO MEET FINAL EFFLUENT LIMITS FOR THE CONSTITUENTS OF CONCERN

The remainder of this study discusses the District's current source identification efforts,

current pollution prevention efforts, and proposed future pollution prevention efforts for copper and mercury.

## **Novato's Source Identification Efforts for the COCs**

### *Copper*

Copper has been identified as a constituent of concern based on the previous permit's effluent limits. As a result, the District monitors its influent and effluent for copper twice monthly. In addition, copper monitoring has been conducted at four locations in the collection system. Two locations are used to characterize commercial/industrial discharges. The other locations are in residential areas. The results of this source monitoring effort were reported in the District's Copper Reduction Study (submitted to the Regional Board December 1, 2001).

Copper levels in one commercial area (businesses in this area include machine shops, auto repair, printers) were higher than the other commercial area (medical/dental ) and the residential areas. Other source identification efforts reported in the Copper Reduction Study included conducting a survey of businesses and estimating load contributions from certain types of businesses in Novato including auto repair facilities, printers, restaurants, laundries, carpet cleaners, and medical facilities. Loadings from commercial activities were estimated as accounting for 21% of the influent loading to the two plants. Loadings from permitted industries were also estimated and accounted for approximately 5% of the total loading to the influent of both plants. Corrosion of copper piping accounts for 44% of the copper loading. Other domestic sources including water supply, laundry graywater, swimming pools, and human waste account for 30% of loadings. Vehicle service facilities and printers were identified as the sources for which source control would be most likely to result in measurable reductions.

### *Mercury*

Mercury has been identified as a constituent of concern based on the previous permit's effluent limits. As a result, the District monitors its influent and effluent for mercury monthly. In addition, mercury monitoring has been conducted at four locations in the collection system. Two locations are used to characterize commercial/industrial discharges. The other locations are in residential areas. The results of this source monitoring effort were reported in the District's Mercury Reduction Study (submitted to the Regional Board November 30, 2001). Mercury levels in one commercial area (medical/dental) had mercury levels that were higher by a factor of 10 compared to the other commercial area (businesses in this area include machine shops, auto repair, printers) and by a factor of 50 when compared to the residential areas. Other source identification efforts reported in the Mercury Reduction Study included conducting a survey of businesses and estimating load contributions from certain types of businesses in Novato including dental offices, medical facilities, laboratories, pottery/ceramic studios, and auto repair facilities. The largest identified controllable sources were dental offices and medical facilities.

## Novato's Prior And Existing Pollution Prevent Efforts for the COCs

The District's pollution prevention program and pretreatment program has a staff of 1. There are 6 permitted industries including 3 clothing dyers, 2 laboratories, and North Marin Water District. The service area is primarily residential. Efforts targeting the COCs are discussed below as well as some general information about the District's pollution prevention program.

### *Copper*

The District's previous pollution prevention efforts associated with copper include source identification studies conducted in 1995 and 2001 and working with Sonoma County Water Agency (SCWA) to adjust the pH of the District's water supply. The 1995 study identified corrosion of copper plumbing as the largest source of copper to the District's influent. In 1995, SCWA initiated pH adjustment of the water supply resulting in dramatic reductions of copper in Novato's influent and effluent. This resulted in a 55% reduction in copper loadings to the treatment plants. Influent levels dropped from an average of 140 ug/L prior to pH control to 57 ug/L in 1996. Effluent levels dropped from an average of 29 ug/L prior to pH control to 12 ug/L. Outreach to vehicle service facilities was also conducted resulting in shops sealing their floor drains to avoid discharges to the sanitary sewer. The impact of this is less clear but may account for some of the approximately 20% additional reduction in influent copper loadings since 1996.

The 2001 study identified corrosion, vehicle service facilities, and printers once again as significant sources and provided an implementation strategy to further address these sources that is repeated below:

Task	Completion Date
1. Develop database of vehicle service facilities	July 1, 2002
2. Develop database of printers	July 1, 2002
3. Assess reduction potential for orthophosphate addition to water supply	July 1, 2002

The databases for vehicle service facilities and printers (Tasks 1 and 2) have been completed. They are updated through semi-annual field inspections, monthly review of business license applications, and annual field surveys to look for new businesses. With respect to Task 3, Sonoma County Water Agency (SCWA) has not yet completed the orthophosphate study. The District is continuing to work with SCWA on this matter.

The 2001 copper reduction study estimated that up to approximately an 8% reduction in the Novato influent levels and a 16% reduction in the Ignacio influent could be achieved by implementing strategies targeting vehicle service facilities and printers. Comparing the MEC to the MDEL in Table 2 indicates that a 74% reduction in copper is needed to achieve consistent compliance with the effluent limit. This is significantly greater than the reduction that may be achieved through source control.

## *Mercury*

Previous pollution prevention efforts targeting mercury include a source identification study conducted in 2001, thermometer exchange and fluorescent lamp recycling. In addition, the District has participated in regional efforts including the BAPPG and the North Bay Watershed Association Mercury Pollution Prevention Program.

The source identification study identified hospitals, dentists, mercury thermometer and certain other household products as significant mercury influent sources for which reduction strategies are available. It is estimated that up to a 51% reduction in mercury influent loadings to the Novato Treatment Plant and up to a 32% reduction in mercury influent loadings to the Ignacio plant may be achieved through pollution prevention. Comparing the MEC of 144 ng/L to the AMEL in Table 2 indicates that an 83% reduction is needed to meet the proposed effluent limit.

The District has initiated efforts to work with household products and dentists as described below.

In 2001, the District worked with the Novato Fire Protection District to conduct a thermometer exchange event. Residents turned in 555 thermometers as well as other mercury containing items at Novato's 4 neighborhood fire stations. The District has also had a program in place for a number of years for recycling fluorescent lamps.

The District is a member of and supporting the North Bay Watershed Association Mercury Pollution Prevention Program. The tasks being conducted under this program include source identification, development of a mercury reduction policy, and developing and conducting programs targeting dental offices, fluorescent lamps, and other mercury containing products (i.e., thermometers and thermostats).

District staff participated in a BAPPG sub-committee responsible for reviewing dental outreach materials developed by the BAPPG. The District is using these materials to work with the area's dental practices.

Other noteworthy features of the District's existing pollution prevention program include:

- The District actively participates in the BAPPG. Recently District staff helped to plan and coordinate the BAPPG/EPA workshop on Effectiveness Measurement.
- The District participates in regional school outreach programs including the School Environmental Education Docents (SEED) project and the Bay Area Environmental Education Resource Fair (BAEER Fair).
- In 2001, the District surveyed medical clinics, chiropractors and veterinary offices regarding management of x-ray solutions and provided information on upcoming disposal events for small quantity generators.
- The District participated in Pollution Prevention Week in 2001. Activities included adopting a resolution supporting Pollution Prevention Week and developing a display

of items that should be recycled and items that should never go down the drain. This display placed in the District's front lobby and the local Farmer's Market. Pollution prevention materials were also distributed to permitted industries, local schools and display at the local libraries, Senior Center, City offices, and the Chamber of Commerce.

- The District established a permanent Household Hazardous Waste facility in April 2002. Residents may use this facility to dispose of a variety hazardous wastes. The facility is open by appointment the first and third Sunday and Monday of each month.

### **Novato's Proposed Pollution Prevention Schedule for the COCs**

#### *Copper*

As noted above the District submitted an implementation plan for copper in its Copper Reduction Study submitted in December 2001. The proposed schedule to minimize copper is as follows:

Task	Completion Date
1. Conduct outreach to vehicle service facilities and printers	July 1, 2003
2. Develop recognition program	July 1, 2003
3. Assess reduction potential for orthophosphate addition to water supply	July 1, 2003
4. Prepare Facility Plan for treatment plant upgrade	July 1, 2003

#### *Mercury*

In addition, to the ongoing recycling programs discussed above and participation in the NBWA Mercury Pollution Prevention Program, the District is planning to work with dentists, medical facilities and laboratories to educate them regarding proper management of mercury containing wastes. The proposed schedule for mercury reduction is as follows:

Task	Completion Date
1. Research other successful dental outreach programs	completed
2. Identify dentists and dental societies in the District	Completed
3. Investigate pretreatment methods	December 1, 2002
4. Develop outreach material	June 1, 2003
5. Semi-annual outreach visits, newsletters, or events	July 1, 2004
6. Technical Memorandum evaluating program	December 1, 2004
7. Identify medical clinics and laboratories	completed
8. Update database of medical clinics and laboratories	Quarterly
9. Semi annual educational visits to each facility	July 1, 2004
10. Technical Memorandum	December 1, 2004
11. Establish a permanent Household Hazardous Waste Facility	April 22, 2002
12. Research other mercury product recycling programs	September 1, 2002
13. Develop public outreach materials	June 1, 2003
14. Semi-annual outreach events/newsletters	July 1, 2004
15. Technical memorandum documenting results	December 1, 2004

In addition to the pollutant specific activities, the District's pollution prevention program will:

- continue to participate in the public events and school outreach programs described above
- continue to participate regularly in BAPPG activities.
- support increased monitoring of effluent and ambient Bay receiving waters for priority pollutants, which include Cu and Hg, as required by the SIP.



**Attachment E:**  
**Comments Received on the Tentative Order**



# NOVATO SANITARY DISTRICT

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## BOARD OF DIRECTORS

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March 26, 2003

Ms. Shin-Roei Lee  
NPDES Division Chief  
California Regional Water Quality Control Board  
1515 Clay Street, Suite 1400  
Oakland, CA 94612

RE: Tentative Order for NPDES Permit Amendment, Novato Sanitary District

Dear Ms. Lee:

Thank you for the opportunity to review the subject document. Overall, we find the TO to be a fair and reasonable resolution to the issues we raised in the appeal of our current permit. Further, we appreciate the efforts of your staff in developing the Order. Our comments follow.

### Provision E.10 (New), page 18

This new provision requires the District to participate in the development of TMDLs or site-specific objectives for copper, mercury, selenium, 4,4'-DDE, and dieldrin. Further, the District is required to annually report on its participation efforts. Although the language appears to be somewhat "boilerplate", we suggest the text be modified to link the District's participation to the TMDL priorities and workplans agreed to with BACWA and the CEP. The District is a member of BACWA, and financially supports the goals and efforts of the CEP. Also, the District requests the Provision be revised to allow the District reporting requirement to be satisfied by the submittal of a group report by BACWA/CEP.

### Table 1 – Self Monitoring Program, page 18

Table 1 has been modified to reflect the change in monitoring for settleable matter to once per month, and changing the sampling location for ammonia, as requested by the District. Table 1 also includes an increase in sampling for suspended solids and BOD to 5 days per week for both influent and effluent for each of our 2 treatment plants. The increase in sampling for effluent suspended solids was discussed and agreed to with staff early in the negotiation process. However, the increase in sampling influent TSS and BOD from 1 to

Ms. Shin-Roei Lee  
March 26, 2003  
Page 2

5 times per week, and an increase in effluent BOD sampling was not included in prior drafts of the amendment .

In order to conserve and focus limited public resources, we request the Board keep the current sampling frequency for influent TSS and BOD (once per week) and effluent BOD (3 times per week). The District is not aware of any technical or engineering argument that would support the increased sampling and commensurate increase in expenditures.

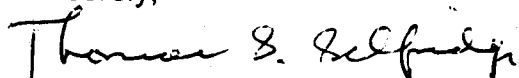
**Order Effective Date, page 18**

The TO states the Order will be effective on June 30, 2003 provided the USEPA Regional Administrator has no objection. The District requests the Order be made effective as of the date of adoption unless significant controversy arises that would require a longer review period for the EPA.

Thank you again for the opportunity to review and comment on the Tentative Order. Again, we appreciate your cooperation in resolving these permit issues, and the effort expended by you and your staff in developing the amendment.

Please contact me if you have any questions about our comments.

Sincerely,



Thomas S. Selfridge  
Manager-Engineer

tss

cc: District Board of Directors  
Larry Walker, Larry Walker Associates  
Kent Alm, District General Counsel  
Beverly James, Technical Services Manager

**Attachment F:**

**Regional Board Staff Response to Comments**

2/24/2003

**Response to Comments**  
**For Item No. 5.A.**  
**Public Hearing**  
**on**  
**Novato Sanitary District**  
**Wastewater Treatment Plants**  
**NPDES Permit Amendment**

One comment was received for the subject tentative order, from Novato Sanitary District (the Discharger). For brevity, each Discharger comment is summarized, and each response given, point by point, in the order presented.

**1. Reporting requirement for TMDL development assistance**

*Provision E.10 requires the Discharger to participate in the development of TMDLs or site-specific objectives for copper, mercury, selenium, 4,4'-DDE and dieldrin, and to report annually on its participation efforts. The Discharger expressed its concern that the language did not adequately allow for the reporting requirements to be met by its continued participation in the Bay Area Clean Water Agencies' (BACWA's) collaborative efforts to assist in accelerated development of Water Quality Attainment Strategies.*

**Response 1:**

The language in Provision E.10 has been augmented to specify that the Discharger's continued participation in BACWA's collaborative efforts and BACWA's annual progress reports will meet the requirements of the Provision, and to specify that, should BACWA not submit the required reports, the Discharger will remain responsible for its own reporting requirements.

**2. Self Monitoring Program**

*The Discharger expressed concern with the proposed increase of influent and effluent sampling for biochemical oxygen demand (BOD) to five times per week (5/wk) would be burdensome on its limited staff resources.*

**Response 2:**

Upon further consideration, Board staff determined that maintaining the current BOD effluent sampling at 3/wk would provide adequate indication of plant performance. The influent BOD sampling is increased from 1/wk to 3/wk so that influent and effluent sampling frequencies

match, facilitating the calculation of percent removal. This approach is consistent with other, similar monitoring programs adopted recently.

### 3. Effective Date

*The Discharger requested that the Tentative Order's effective date be made sooner than June 30, 2003.*

#### **Response 3:**

Board staff concurs, and the effective date in the Tentative Order is changed to the first day of the month following adoption – May 1, 2003, for this particular permit. According to the Memorandum of Understanding between U.S. EPA and the State Board, dated September 25, 1989, a permit should be effective 50 days after Board adoption provided U.S EPA does not object to it. A permit can become effective within the 50 day period if there were no significant comments received during the public comment period. In this case, the only comments received were from the Discharger and all comments have been resolved.